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Supplementary Information

Theoretical Insight into the Origins of Chemo- and Diastereoselectivity in the Palladium-Catalyzed (3+2) Cyclization of 5-Alkenyl Thiazolones

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1. Formation of L_n-Pd-1a (L = PPh_3, *n* = 1-3) coordinated complexes

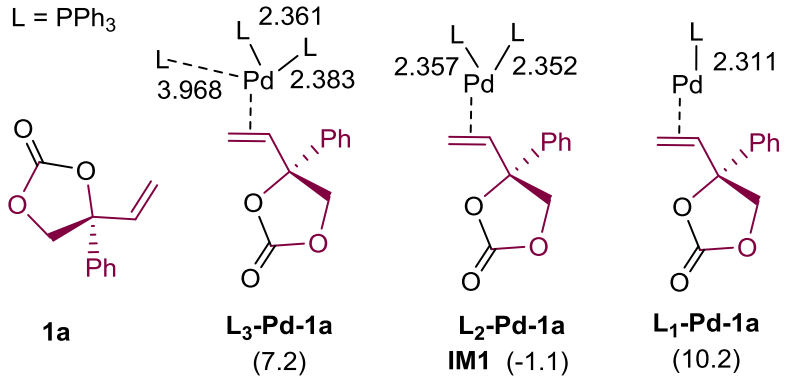


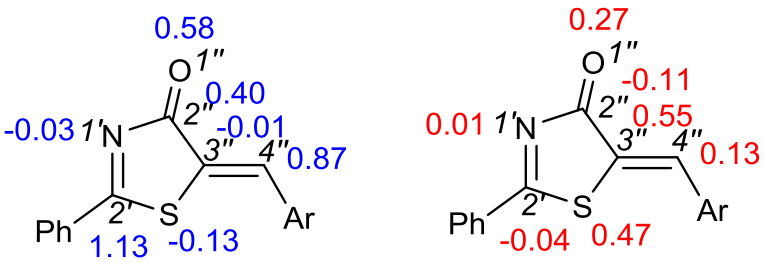
Figure S1. Possible coordinated complexes L_n-Pd-1a (L = PPh_3, *n* = 1-3) and the relative Gibbs free energy (Δ*G*, kcal mol^{-1}) relative to the vinylethylene carbonate **1a** and $Pd(PPh_3)_4$ catalyst at the M06-L/6-311++G(d,p),SDD*(PCM-SMD,DCM)//M06-L/6-31G(d),SDD*(PCM-SMD,DCM) level. Selected distances shown are in angstrom (Å). These are the same in the following figures.

First of all, the possible coordinated complexes **L_n-Pd-1a** (*n* = 1-3) formed between vinylethylene carbonate **1a** and $Pd(PPh_3)_4$ catalyst have been investigated. This can be expressed by the following chemical reaction:

$$PdL_4 + \mathbf{1a} \rightarrow \mathbf{L_n\text{-}Pd\text{-}1a} + (4-n)L \quad (n = 1\text{-}3) \qquad (1)$$

As shown in Figure S1, when the vinyl moiety of substrate **1a** coordinates to the Pd center in $Pd(PPh_3)_4$, a ligand exchange reaction takes place, leading to the **L_3-Pd-1a** complex. This reaction is calculated to be endergonic by 7.2 kcal mol^{-1} (*n* = 3 in the reaction (1)). Upon optimization, one phosphine ligand (L = PPh_3) in the **L_3-Pd-1a** dissociates from the Pd center with the Pd–P distance of 3.968 Å, because of steric hindrance. Next, **L_3-Pd-1a** releases the L ligand free, leaving a $Pd(PPh_3)_2$-containing molecular complex **L_2-Pd-1a**, with the exoergicity of 8.3 kcal mol^{-1}. Afterwards, the third L free is released from **L_2-Pd-1a**, the Δ*G* of formed **L_1-Pd-1a** increases by 11.3 kcal mol^{-1}. In short, the **L_2-Pd-1a** (**IM1**) containing two phosphine ligands is the energetically most favorable active species, with the stabilization energy of 1.1 kcal mol^{-1} (*n* = 2 in the reaction (1)). This result is in good accordance with both the experimental and theoretical investigations, in which [$Pd^0(PPh_3)_2$] complex is the most preferred form to enter catalytic cycles in solution.[1]

2. Reactivity index analysis for substrates



2a Ar = *p*-Cl-C_6H_4

Figure S2. The reactivity index analysis from Parr functions for the reactivity sites of 5-alkenyl thiazolone **2a**. The blue values are the corresponding local electrophilic index ω_k (eV) of the atoms. The red values are the corresponding local nucleophilic index N_k (eV) of the atoms.

When the **2a** reacts with the palladacyclic species, there are mainly two reactive moieties, *i.e.*, aza-thioester moiety and *α,β*-unsaturated carbonyl moiety.

As shown in Figure S2, for aza-thioester moiety, local electrophilic indexes (ω_k) of C2' and N1' atoms are 1.13 and –0.03 eV, respectively, basing on the reactivity index analysis from Parr functions. It is indicated that C2' atom in the aza-thioester moiety possesses the larger ω_k, which should be the more favorable active site by the electrophilic attack of six-membered palladacyclic species.

For *α,β*-unsaturated carbonyl moiety, local electrophilic indexes (ω_k) of O1'', C2'', C3'', and C4'' atoms are 0.58, 0.40, –0.01, and 0.87 eV, respectively. It is indicated that C4''atom in th *α,β*-unsaturated carbonyl moiety possesses the largest ω_k, which should be the most favorable active site by the electrophilic attack of six-membered palladacyclic species.

3. Isomers of products 3a and 4a

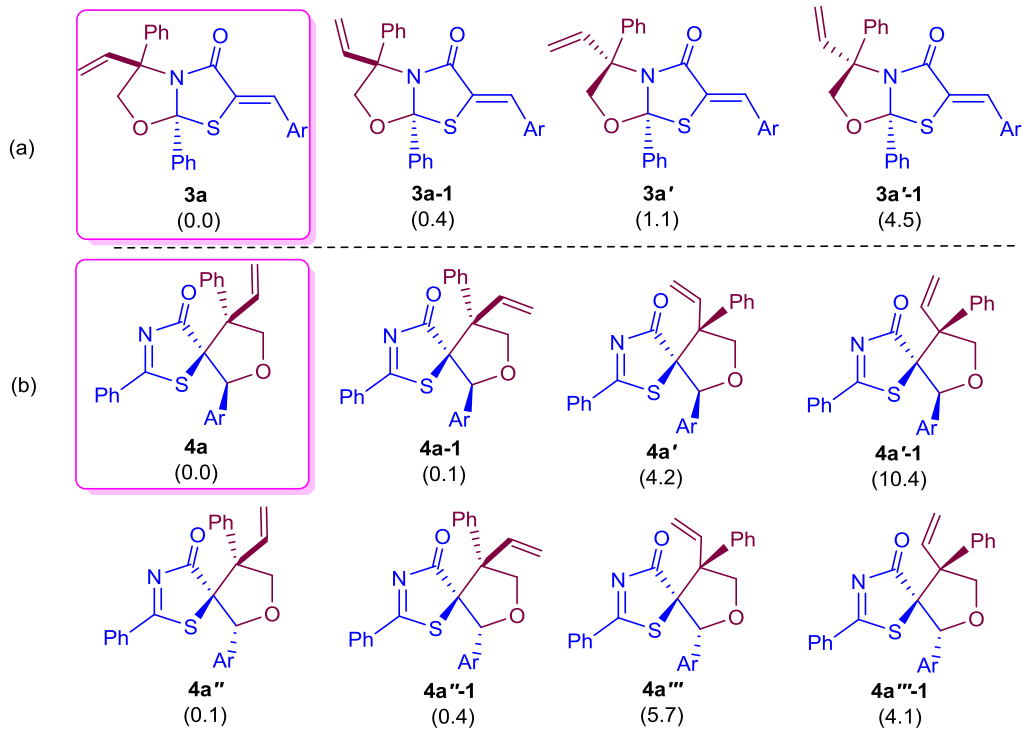
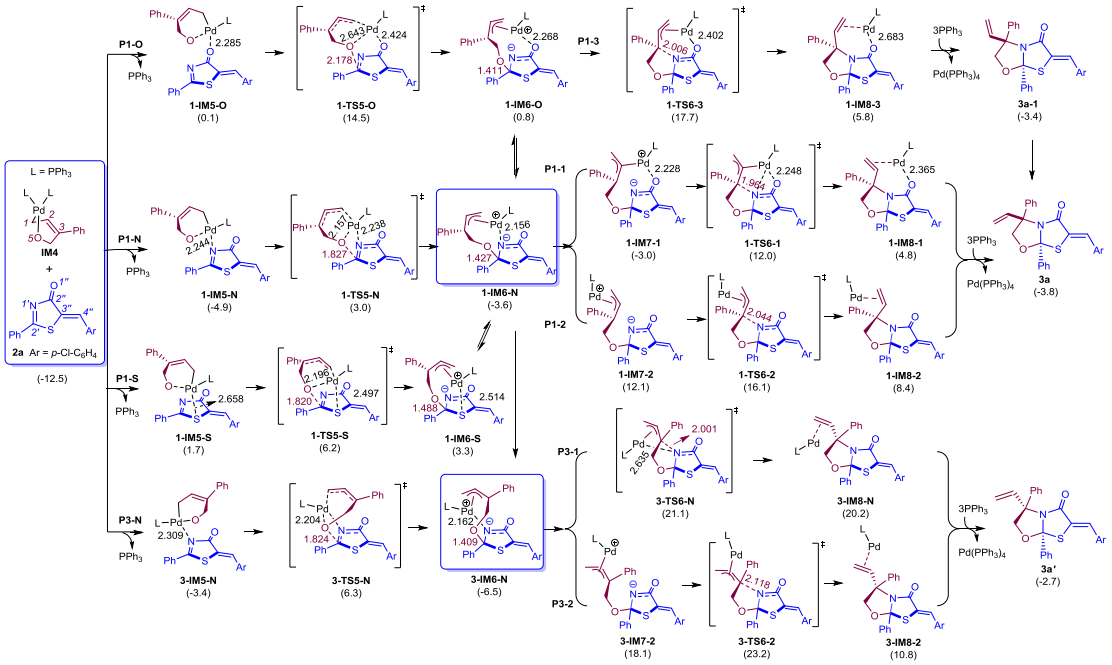


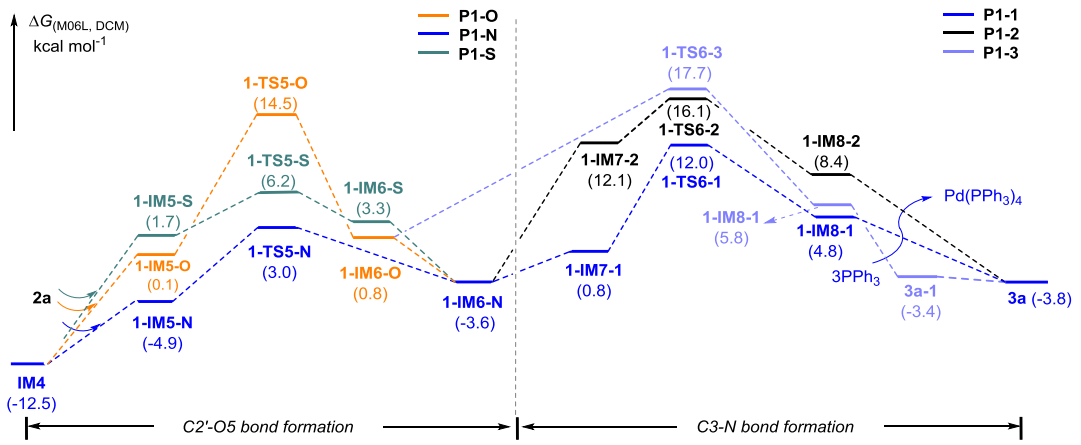
Figure S3. Isomers of bicyclic product **3** with the relative Gibbs free energies (kcal mol^{-1}) relative to **3a** (a) and isomers of spirocyclic product **4** with the relative Gibbs free energies (kcal mol^{-1}) relative to **4a** (b) at the M06-L/6-311++G(d,p),SDD*(PCM-SMD,DCM)//M06-L/6-31G(d),SDD*(PCM-SMD,DCM) level.

As depicted in Figure S3, for bicyclic product **3**, there are four isomers, *i. e.* **3a**, **3a-1**, **3a'**, and **3a'-1**. The relative Gibbs free energies increase as **3a** < **3a-1** < **3a'** < **3a'-1** in the DCM solution. It is indicated that the 3a is energetically the most preferred in the DCM solution. Wherein, **3a-1** is the conformer of predominant product **3a**. **3a** and **3a'** are diastereoisomers.

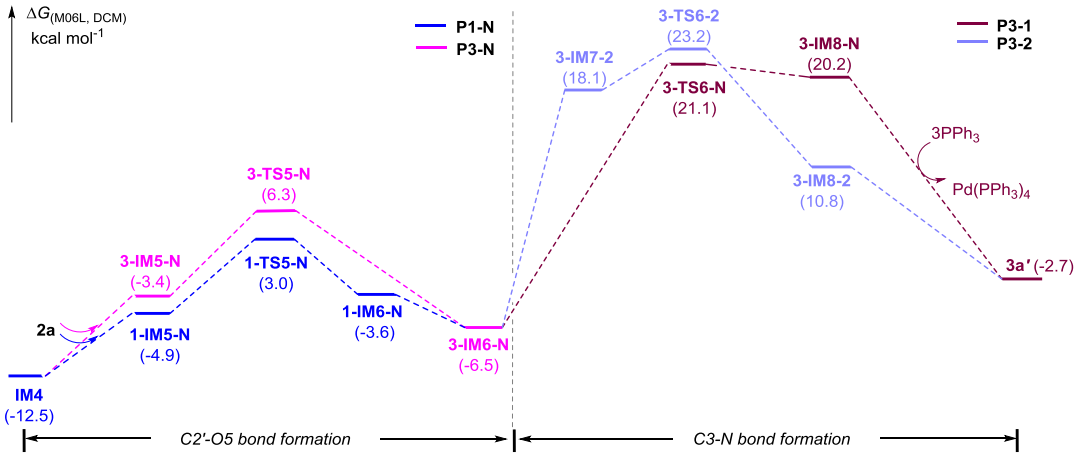
Alternatively, for spirocyclic product **4**, the relative Gibbs free energies increase as **4a** < **4a-1** = **4a''** < **4a''-1** < **4a'''-1** < **4a'** < **4a'''** < **4a'-1** in the DCM solution. That is to say, **4a** is thermodynamically the most preferable in the DCM solution. Wherein, the **4a'** and **4a''** are the diastereoisomer of **4a**. The **4a** is the isomer of predominant product **3a**. Thus, **4a** is selected as model product of spirocyclic product along *C4''-selectivity* reaction pathways.



(a)



(b)



(c)

Figure S4. Schematic mechanisms and Gibbs free energy profiles for the formation of products **3a** (a and b) and **3a'** (a and c) catalyzed by the $Pd(PPh_3)_4$ along *C2'-selectivity* reaction pathways. Selected distances shown are in angstrom (Å).

As shown in Figure S4 and Table S1, there are nine reaction pathways for the formation of **3a**, denoted as **P1a** (**P1-N** + **P1-1**), **P1a-1** (**P1-S** + **P1-1**), **P1a-2** (**P1-O** + **P1-1**), **P1b** (**P1-N** + **P1-2**), **P1b-1** (**P1-O + P1-2**), **P1b-2** (**P1-S + P1-2**), **P1c** (**P1-N** + **P1-3**), **P1c-1** (**P1-O + P1-3**), and **P1c-2** (**P1-S + P1-3**). The **P1a**, **P1a-1**, and **P1a-2** comprise the EHHP of 12.0 kcal mol^{-1} at **1-TS6-1**, the HEB of 15.6 kcal mol^{-1} at the reaction step of **1-IM6-N** → **1-TS6-1**. The **P1b**, **P1b-1**, and **P1b-2** involves the EHHP of 16.1 kcal mol^{-1} at **1-TS6-2**, the HEB of 19.7 kcal mol^{-1} at the reaction step of **1-IM6-N** → **1-TS6-2**. The reaction pathway **P1c** and **P1c-2** includes the EHHP of 17.7 kcal mol^{-1} at **1-TS6-3**, the HEB of 21.3 kcal mol^{-1} at the reaction step of **1-IM6-N** → **1-TS6-3**. The **P1c-1** includes the EHHP of 17.7 kcal mol^{-1} at **1-TS6-3**, the HEB of 16.9 kcal mol^{-1} at the reaction step of **1-IM6-O** → **1-TS6-3**. The the exoergicity of **3a** formation is 3.8 kcal mol^{-1}. The above computed results indicate **P1a** kinetically favourable reaction pathway.

Alternatively, for the formation of **3a'**, the MERP should be made of **P1-N** and **P3-1**, denoted as **P3a**. The detailed reaction pathway of **P3a** is almost similar to that of **P1a**. The reaction pathway **P3a** possesses the EHHP of 21.1 kcal mol^{-1} at **3-TS6-N**, the HEB of 27.6 kcal mol^{-1} at the reaction step of **3-IM6-N** → **3-TS6-N**, and the exoergicity of 2.7 kcal mol^{-1}.

Compared with **P3a**, the reaction pathway **P1a** involves lower EHHP (12.0 *vs* 21.1 kcal mol^{-1}), lower HEB (15.6 *vs* 27.6 kcal mol^{-1}) and higher exoergicity (3.8 *vs* 2.7 kcal mol^{-1}). That is to say, the **P1a** proceeded preferentially and the desired **3a** is the energetically favoured product.

4. Formation Mechanisms of product 4a along *C4''-selectivity* pathways

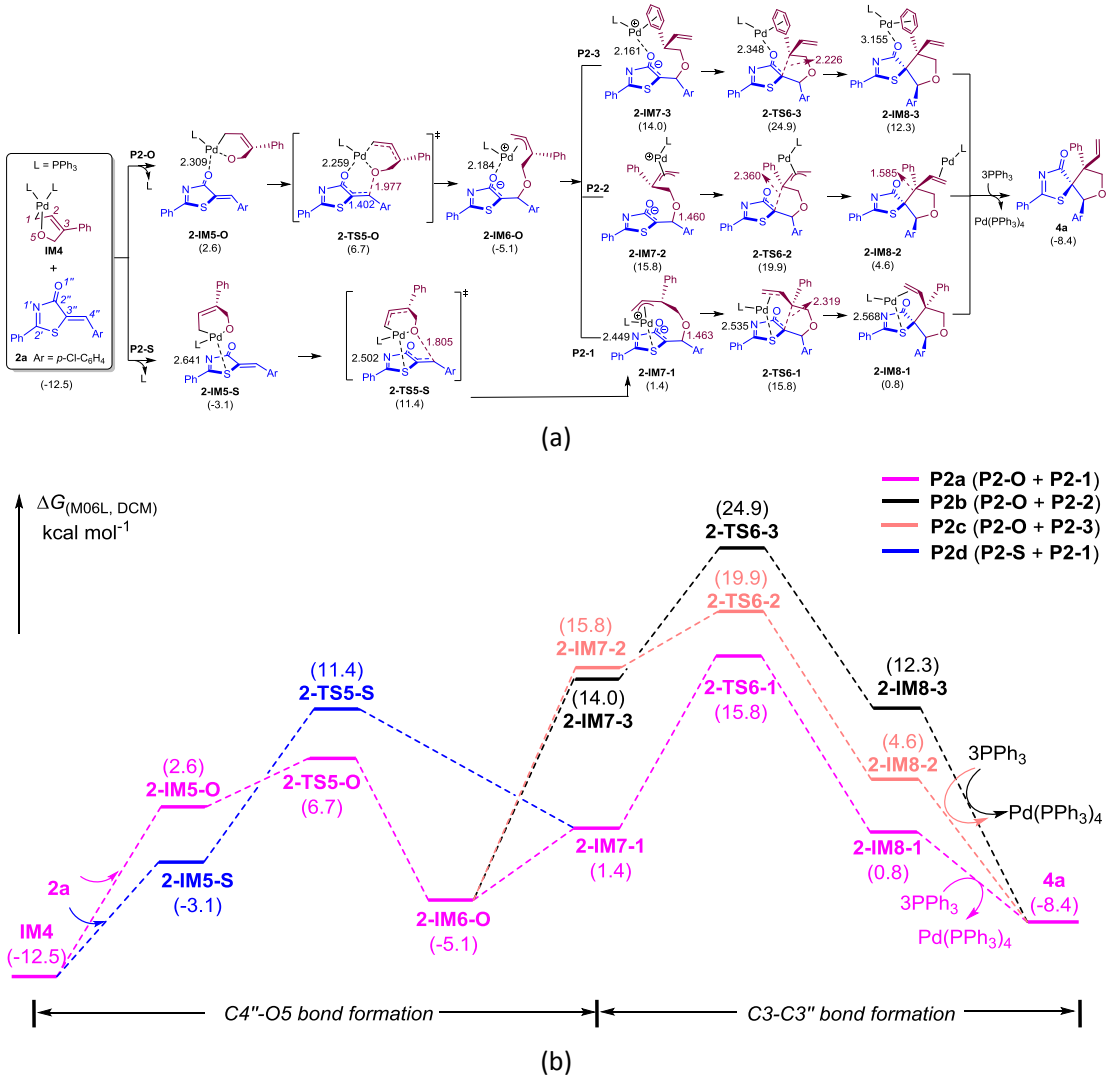


Figure S5. Schematic mechanism (a) and Gibbs free energy profiles (b) for the formation of products **4a** catalyzed by the $Pd(PPh_3)_4$ along *C4''-selectivity* reaction pathways. Relative Gibbs free energies (ΔG, kcal mol^{-1}) relative to initial reactants are obtained at the M06-L/6-311++G(d,p),SDD*(PCM-SMD,DCM)//M06-L/6-31G(d),SDD*(PCM-SMD,DCM) level. Selected distances shown are in angstrom (Å).

The schematic mechanism and Gibbs free energy profiles for the formation of products **4a** along *C4''-selectivity* reaction pathways are depicted in Figure S5, respectively. When the heteroatom (X = O and S) of substrate **2a** coordinates to the Pd center of palladacyclic intermediate, there are three reaction pathways to form products **4a**, denoted as **P2a** (**P2-O** + **P2-1**), **P2b** (**P2-O** + **P2-2**), **P2c** (**P2-O** + **P2-3**), and **P2d** (**P2-S** + **P2-1**).

As shown in Figure S5, for **P2-O**, the four-coordination complex **2-IM5-O** with the Pd–O distance of 2.309 Å is initially formed by interacting with the O atom in substrate **2a** with metal Pd center of **IM4**. Next, the formation of C4''–O5 bond takes place *via* a chair-ten-membered **2-TS5-O** through a nucleophilic attack of the anionic O5 atom of palladacyclic moiety onto C4''

atom of **2a**, giving rise to a zwitterionic π-allyl-Pd complex **2-IM6-O** with the Pd–O distance of 2.184 Å. The energy barrier for this step is 4.1 kcal mol^{-1}. After that, **2-IM6-O** is converted to η^2-coordination complexes **2-IM7-1** (O to S), **2-IM7-2** (inner-sphere to outer-sphere), and **2-IM7-3** (π-allyl η^3 to η^2) through the rearrangement of coordination atoms with the endoergicity of 6.5, 20.9, and 19.1 kcal mol^{-1}, respectively. From **2-IM7-1**, the formation of C–C bond takes place *via* five-membered cyclic **2-TS6-1**, generating a complex **2-IM8-1** with the Pd–S chelating interaction and η^2-coordination of olefin group. From **2-IM7-2**, the formation of C–C bond occurs *via* five-membered cyclic **2-TS6-2** through outer-sphere mechanism, generating the Pd-L-containing complex 2-IM8-2. On the other hand, from **2-IM7-3**, the formation of C–C bond occurs *via* a five-membered cyclic **2-TS6-3** passing through intramolecular allylic alkylation, which further affords to a complex **2-IM8-3** with the Pd–O chelating interaction and η^2-coordination of aryl group. Finally, in the presence of three PPh_3 molecules, **2-IM8-1**, **2-IM8-2**, and **2-IM8-3** release the product **4a** free, leaving the catalyst $Pd(PPh_3)_4$ behind. Comparison of the energies (15.8, 19.9, *vs* 24.9 kcal mol^{-1}) and structures of transition states **2-TS6-1**, **2-TS6-2**, and **2-TS6-3** indicated that the **P2a** *via* **2-TS6-1** is more favorable pathway. This can be attributed to the fact that there exist the lp-π and CH-π interactions between N atom and –CH moiety as well as aryl groups in the **2-TS6-1** (See Figure S10). The **P2a** is predicted to exothermic by 8.4 kcal mol^{-1}, which involves the EHHP of 15.8 kcal mol^{-1} at **2-TS6-1** and the HEB of 20.9 kcal mol^{-1} at the reaction step of **2-IM6-O** → **2-TS6-1**.

Alternatively, for **P2-S**, a four-coordination complex **2-IM5-S** with Pd–S chelating interaction is first formed by coordinating the S atom of **2a** with the Pd atom of **IM4**. Subsequent the C4''–O5 bond formation takes place *via* nine-membered cyclic **2-TS5-S**, yielding a **2-IM7-1**. The following reaction pathway is **P2-1**. It is obvious that, the pathway **P2-O** is kinetically more preferable than **P2-S**, because of its lower EHHP (6.7 *vs* 11.4 kcal mol^{-1}) and lower HEB (19.2 *vs* 23.9 kcal mol^{-1}) for the C4''–O5 formation step.

5. DFT-Optimized geometries for transition states

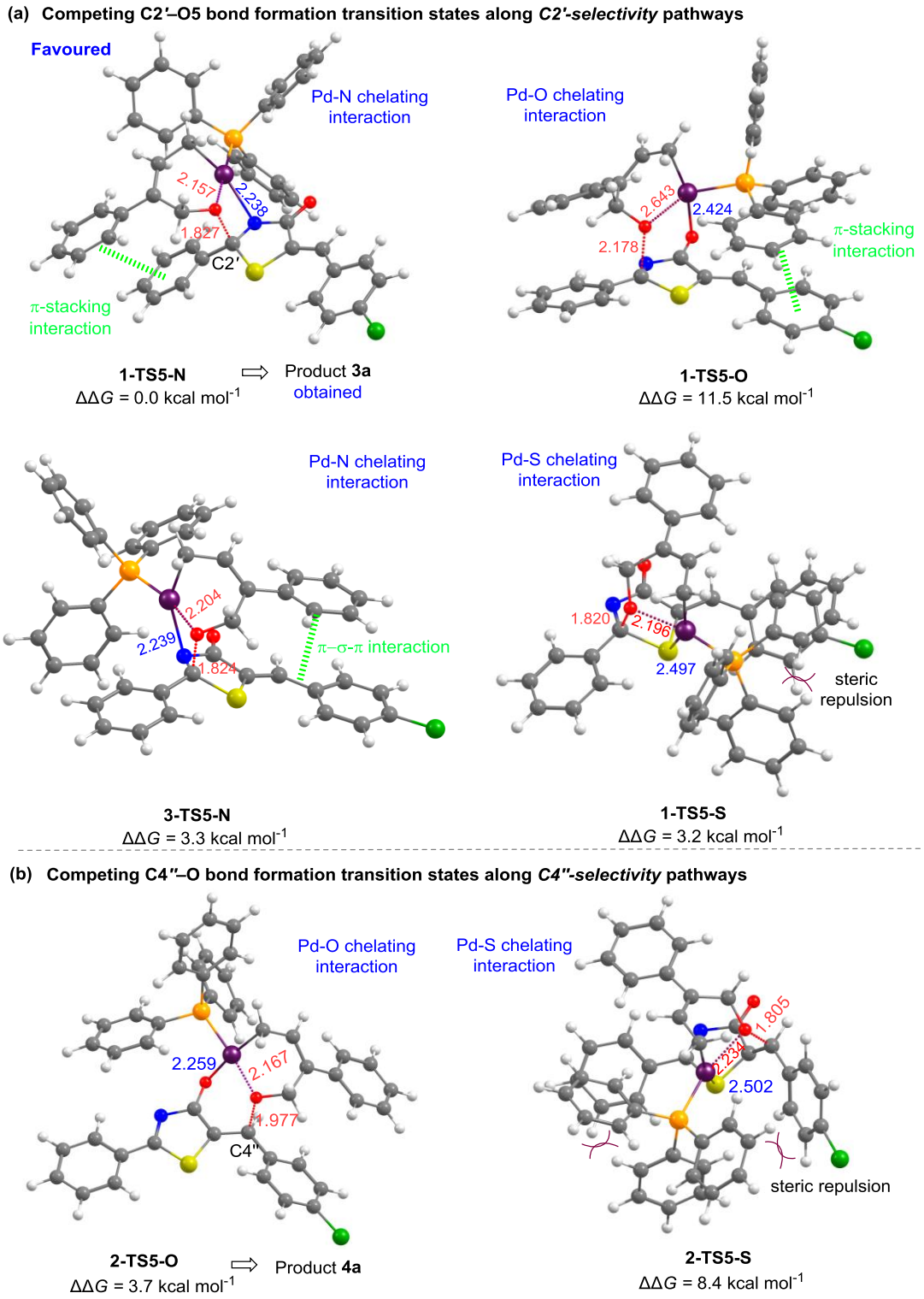


Figure S6. DFT-Optimized geometries and the difference in relative Gibbs free energies (ΔΔ*G*, kcal mol^{-1}) of chemoselectivity- and diastereoselectivity-determining transition states in the presence of **2a**. (a) Competing C2'–O5 bond formation transition states. (b) Competing C4''–O bond formation transition states. Selected bond lengths are reported in Å. The visualized weak interaction is shown in Figure S10.

As depicted in Figure S6, **1-TS5-N** along the *C2'-selectivity* pathway to form major product **3a** is the most favorable among six competing transition states, which is consistent with the excellent chemoselectivity in experiments.[2] Comparing chemoselectivity-competing **1-TS5-N** and **2-TS5-O**, the favorable Pd–N chelation lead to the preference of **1-TS5-N**. In addition, in the presence of Pd–S chelation, there are the significant steric repulsions between the $–PPh_3$ group and the aromatic moieties of substrate **2a**, leading to unfavorable transition states **1-TS5-S** and **2-TS5-S**. Therefore, the Pd–X chelating effect plays a crucial role in the controlled chemoselectivity. The stronger Pd–X interactions have a larger chelation effect on C2'–O5 bond formation. Particularly, the Pd–N chelating interaction to avoiding the unfavorable steric repulsions and the favorable strong π-stacking effect are responsible for lower the relative Gibbs free energies (Δ*G*) in the chemoselectivity-determining step, facilitating the formation of predominant product **3a**.

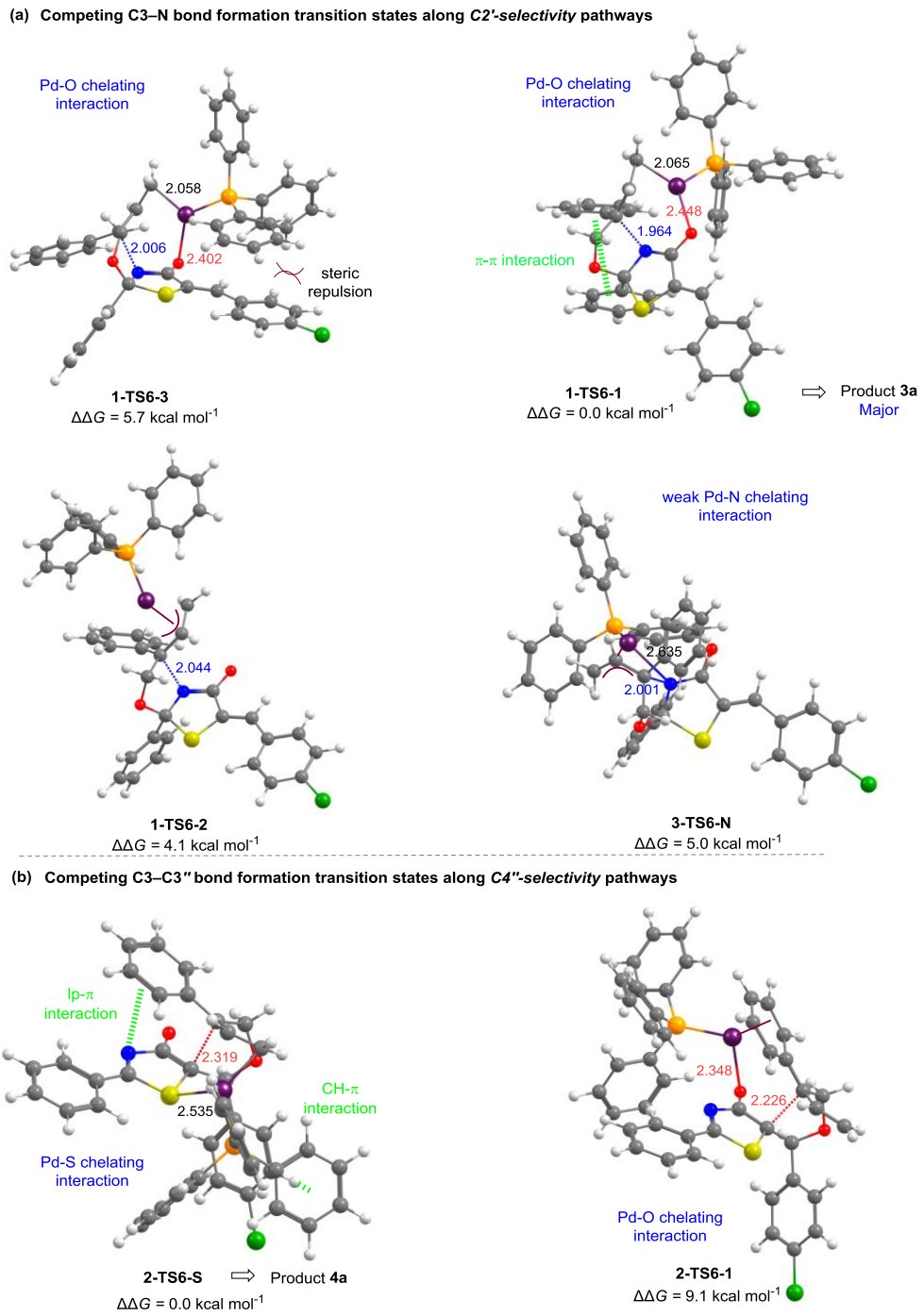


Figure S7. DFT-Optimized geometries and relative Gibbs free energies (Δ*G*, kcal mol^{-1}) of rate-determining transition states. (a) Competing C3–N bond formation transition states. (b) Competing C3–C3'' bond formation transition states. Selected bond lengths are reported in Å.

6. Atom in Molecule (AIM) analysis for key species

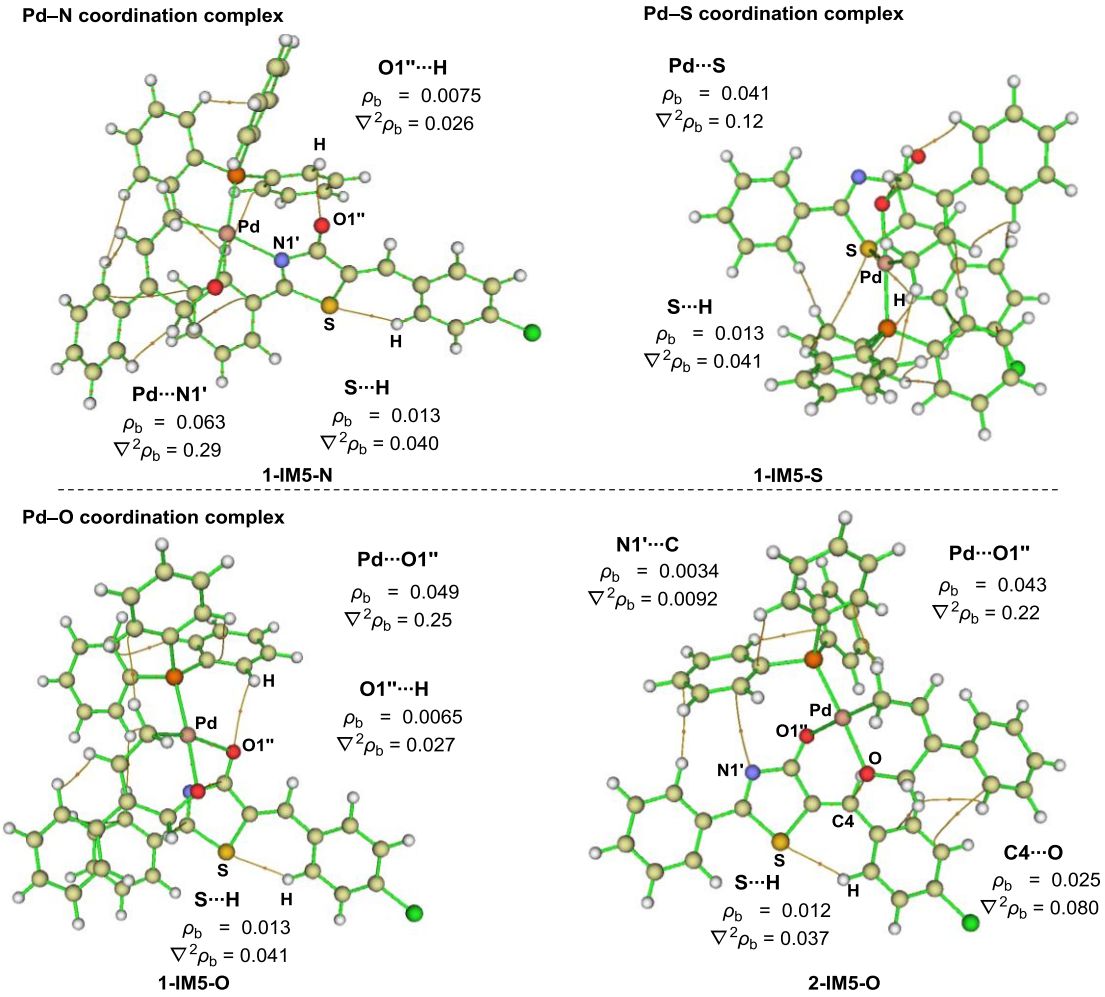


Figure S8. Density of all electrons (ρ, e bohr^{-3}) and Laplacian of electronic density ($\nabla^2\rho$, e bohr^{-5}) at the (3, -1) bond critical points (BCPs) of selected H-bonds and coordination bonds in Pd–X (X = N, O, and S) coordination complexes in the presence of **2a**, based on Atom in Molecule (AIM) analysis. Orange dots are BCPs.

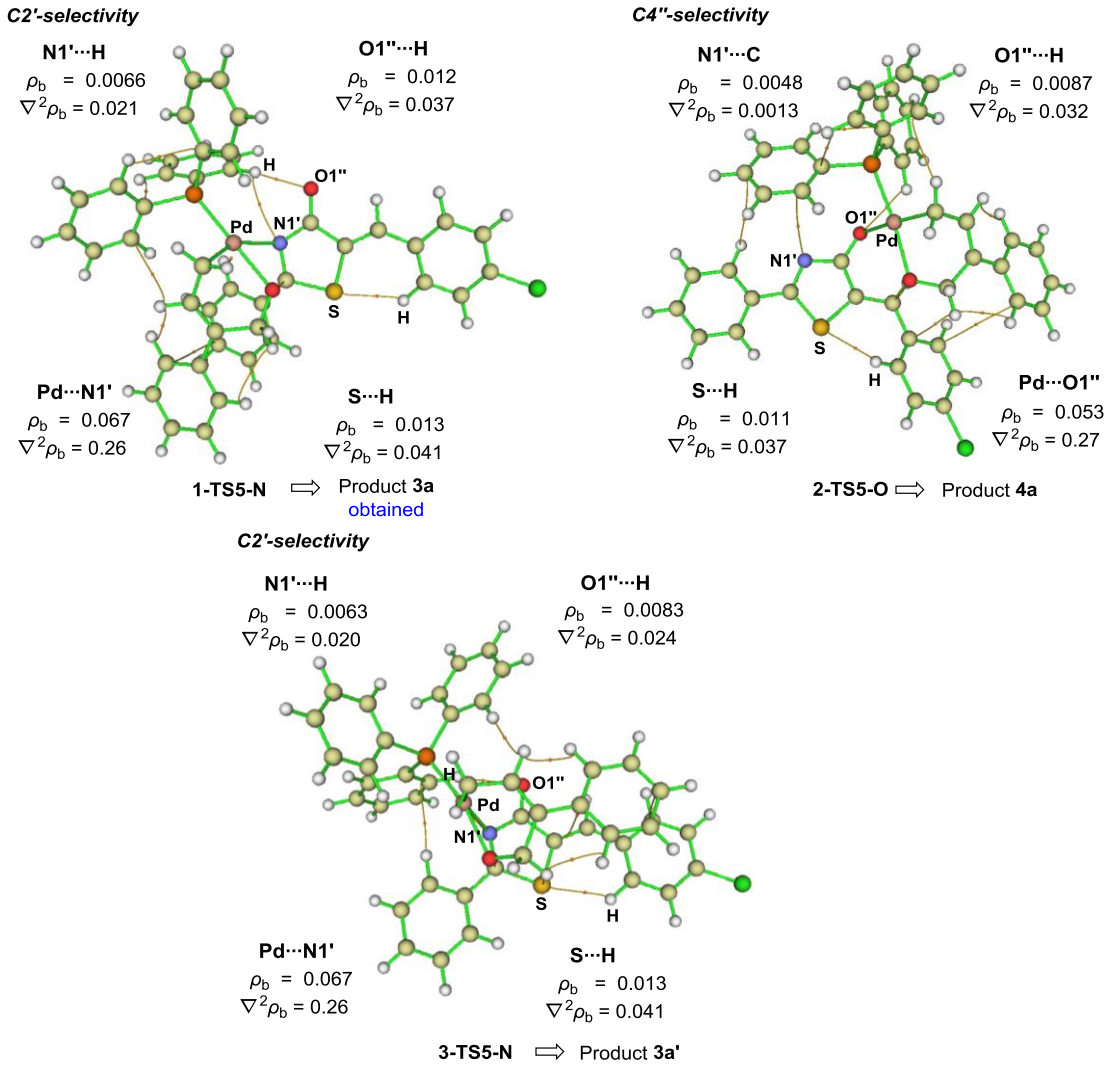


Figure S9. Density of all electrons (ρ, *e* bohr^{-3}) and Laplacian of electronic density ($\nabla^2\rho$, *e* bohr^{-5}) at the (3, -1) bond critical points (BCPs) of selected H-bonds and coordination bonds for chemoselectivity-determining and diastereoselectivity-determining transition states, based on Atom in Molecule (AIM) analysis. Orange dots are BCPs.

The values of the electronic density (ρ) at the bond critical points (BCPs) correlate well with the bond distances: the shorter the bond, the larger the ρ value. The strength of H-bonds and coordination bonds in the species can be quantified by the value of the ρ on the corresponding BCP.[3a,3b]

Moreover, the predict binding energies of H-bonds (HBs) in the neutral complexes were fitted using the following equation:[3c]

$E(\mathrm{HB}) = -223.08*\rho(\mathrm{BCP}) + 0.7423$ kcal mol^{-1}

where ρ_{BCP} is the electron density at the bond critical point (BCP) of HBs (*e* Bohr^{-3}), obtained by Atom in Molecule (AIM) analysis.

7. Noncovalent interaction (NCI) analysis for C–O bond formation

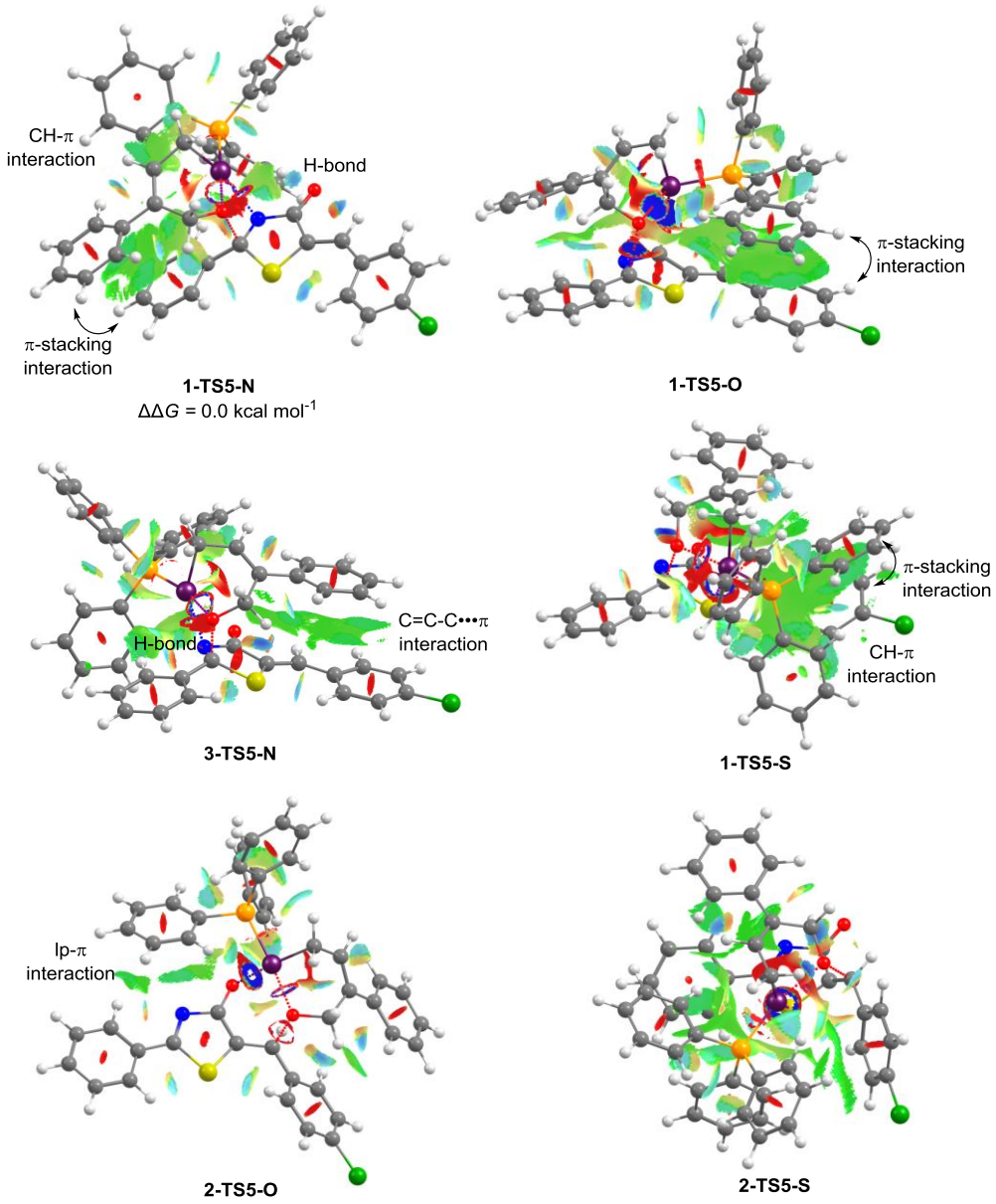
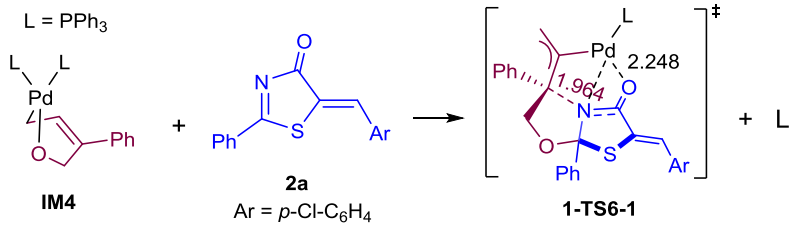
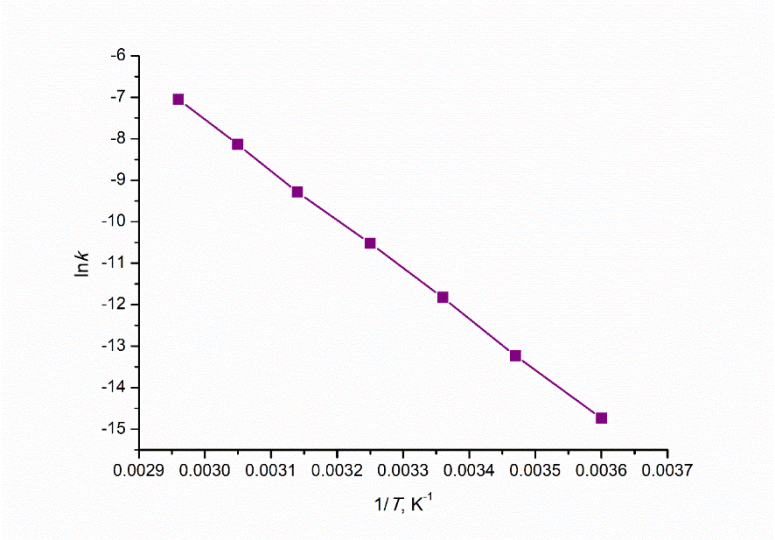


Figure S10. The non-covalent interactions for the six competing C–O bond formation transition states (isosurface value = 0.50 *e* bohr^{-3}) in the presence of **2a**. The surfaces are coloured on a blue-green-red scale ranging from –0.02 to 0.02 *e* bohr^{-3}. Blue, green, and red regions represent strong attractive interactions, Van der Waals interactions, and repulsive interactions, respectively. The green oval represents the favorable π-stacking interaction between two aromatic moieties.

Noncovalent interaction (NCI) analysis indicates that there exist the strong π-stacking and π-σ-π interactions between –Ph group and the aromatic moiety of **2a** in the transition states **1-TS5-N**, **1-TS5-O**, and **2-TS5-N**, which determines the selectivity of C2'-selectivity active sites in the **2a**. Herein, the Δ*G* of two coordination-competing **1-TS5-N** and **1-TS5-O** is 11.5 kcal mol^{-1} in the C2'-selectivity. This may be ascribed to the chelating ability of Pd–X (X = N, O, S). As mentioned earlier, the binding strength of Pd–N in **1-TS5-N** is stronger than that of Pd–O chelation in **1-TS5-O**.

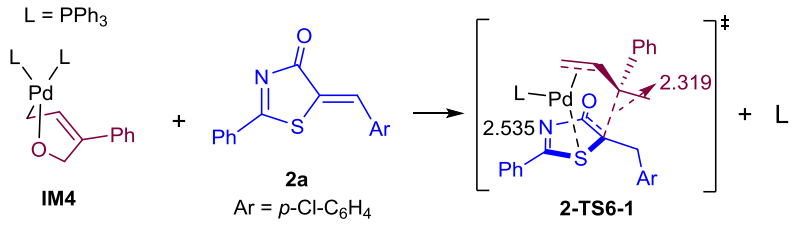
8. Arrhenius plots of rate constants for the crucial reaction steps

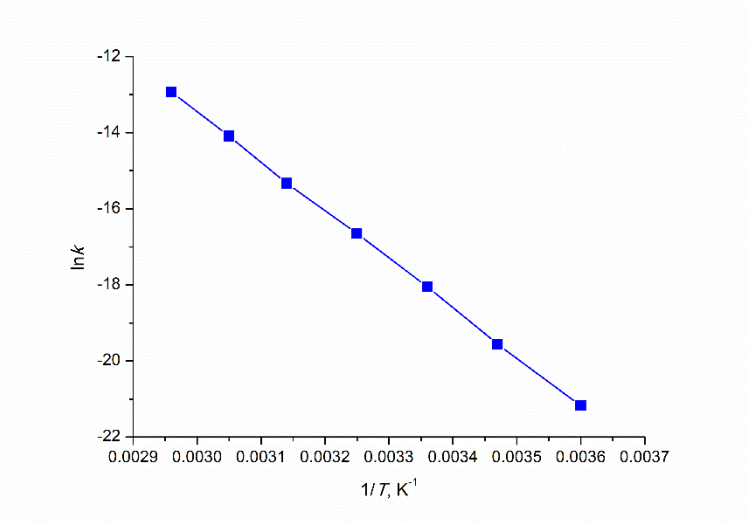




$$k_1 = 2.527\times10^{12}\exp(-100\ 059/RT)\quad (s^{-1}\ mol^{-1}\ dm^3)$$

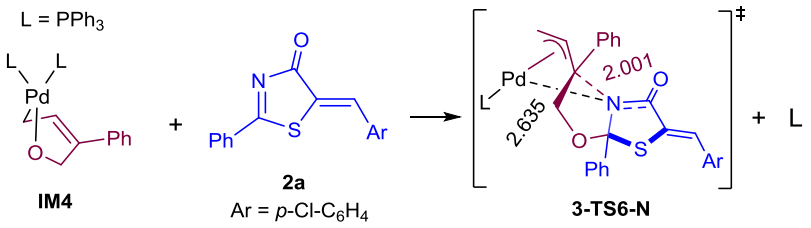
Figure S11. Arrhenius plots of rate constants for the crucial reaction step **IM4** + **2a** → **1-TS6-1** + PPh_3 for the formation of product **3a** along the *C2'-selectivity* reaction pathway.

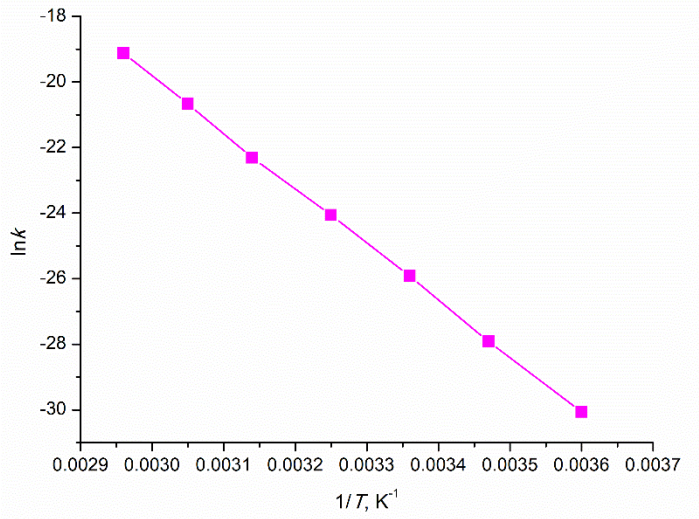




$$k_2 = 9.518\times10^{10}\exp(-107\ 367/RT) \quad (s^{-1}\ mol^{-1}\ dm^3)$$

Figure S12. Arrhenius plots of rate constants for the crucial reaction step **IM4** + **2a** → **2-TS6-1** + PPh_3 for the formation of product **4a** along the *C4''-selectivity* reaction pathway.





$$k_3 = 5.015\times10^{13}\exp(-142\ 386/RT)\quad (s^{-1}\ mol^{-1}\ dm^3)$$

Figure S13. Arrhenius plots of rate constants for the crucial reaction step **IM4** + **2a** → **3-TS6-N** + PPh_3 for the formation of product **3a'** along the *C2'-selectivity* reaction pathway.

9. Comparison of energies for the formation of products 3a and 3a'

Table S1. Energy height of the highest point (EHHP, kcal mol^{-1}), highest energy barrier (HEB, kcal mol^{-1}) and exoergicity (kcal mol^{-1}) for the formation of products **3a** and **3a'** between 5-alkenyl Thiazolone **2a** and palladacyclic intermediate **IM4**.

products	reaction pathway [a]	EHHP (transition state)	HEB (reaction step)	exoergicity
3a	**P1a** (**P1-N** + **P1-1**)	**12.0** (**1-TS6-1**)	**15.6** (**1-IM6-N** → **1-TS6-1**)	3.8
	P1a-1 (**P1-S** + **P1-1**)	12.0 (**1-TS6-1**)	15.6 (**1-IM6-N** → **1-TS6-1**)	
	P1a-2 (**P1-O** + **P1-1**)	12.0 (**1-TS6-1**)	15.6 (**1-IM6-N** → **1-TS6-1**)	
	P1b (**P1-N** + **P1-2**)	**16.1** (**1-TS6-2**)	**19.7** (**1-IM6-N** → **1-TS6-2**)	
	P1b-1 (**P1-O + P1-2**)	16.1 (**1-TS6-2**)	19.7 (**1-IM6-N** → **1-TS6-2**)	
	P1b-2 (**P1-S + P1-2**)	16.1 (**1-TS6-2**)	19.7 (**1-IM6-N** → **1-TS6-2**)	
	P1c (**P1-N** + **P1-3**)	17.7 (**1-TS6-3**)	21.3 (**1-IM6-N** → **1-TS6-3**)	
	P1c-1 (**P1-O + P1-3**)	**17.7** **(1-TS6-3)**	**16.9** **(1-IM6-O** → **1-TS6-3)**	
	P1c-2 (**P1-S** + **P1-3**)	17.7 (**1-TS6-3**)	21.3 (**1-IM6-N** → **1-TS6-3**)	
3a'	**P3a** (**P1-N** + **P3-1**)	**21.1** (**3-TS6-N**)	**27.6** (**3-IM6-N** → **3-TS6-N**)	2.7
	P3a-1 (**P3-N** + **P3-1**)	21.1 (**3-TS6-N**)	27.6 (**3-IM6-N** → **3-TS6-N**)	
	P3b (**P1-N** + **P3-2**)	23.2 (**3-TS6-2**)	29.7 (**3-IM6-N** → **3-TS6-2**)	
	P3b-1 (**P3-N** + **P3-2**)	23.2 (**3-TS6-2**)	29.7 (**3-IM6-N** → **3-TS6-2**)	

[a] The (3+2) cyclization reaction pathway is put together from the reaction pathway of C–O bond formation and the reaction pathway of C–N or C–C bond formation.

10. Turnover Frequency (TOF) analysis for whole catalytic cycle

Table S2. Turnover Frequency (TOF) of the Catalytic Cycle for Cycloaddition Reactions between 5-alkenyl Thiazolone **2a** and Vinylethylene Carbonate **1a** Catalyzed by the $Pd(PPh_3)_4$ Catalyst.

attack sites	reaction pathways	rate-determining steps		TOF (s^{-1})	k, s^{-1} mol^{-1} dm^3	$\Delta G^{\neq a}$ (J mol^{-1})	$\Delta G^{\neq a}$ (kcal mol^{-1})	$\Delta\Delta G^{\neq b}$ (kcal mol^{-1})	products
		TDI (G_{TDI}, kcal mol^{-1})	TDTS (G_{TDTS}, kcal mol^{-1})						
C2'-selectivity	**W-1**	**IM4** + **2a** (-12.5)	**1-TS6-1** + PPh_3 (12.0)	6.66×10^{-6}	$k_1 = 2.527\times10^{12}\exp(-100\ 059/RT)$	1.0×10^5	23.9	1.8	**3a**[c] (obtained)
C4''-selectivity	**W-2**	**IM4** + **2a** (-12.5)	**2-TS6-1** + PPh_3 (15.8)	1.09×10^{-8}	$k_2 = 9.518\times10^{10}\exp(-107\ 367/RT)$	1.1×10^5	25.7		**4a**
C2'-selectivity	**W-3**	**IM4** + **2a** (-12.5)	**3-TS6-N** + PPh_3 (21.1)	1.15×10^{-12}	$k_3 = 5.015\times10^{13}\exp(-142\ 386/RT)$	1.4×10^5	34.0	10.1	**3a'** [c]

[a] $\Delta G^{\neq}$ is the activation Gibbs free energy barrier.

[b] $\Delta\Delta G^{\neq}$ represents the difference in apparent activation Gibbs free energy barrier (kcal mol^{-1}).

[c] Theoretical diastereoselectivity (%) are calculated by Curtin-Hammett principle[4] and the quantitative computational modeling of selectivity reported by Breslow and Friesner[5].

$$\text{Theoretical diastereoselectivity}(\%) = \frac{\exp(-\Delta\Delta G^{\neq}/RT)-1}{\exp(-\Delta\Delta G^{\neq}/RT)+1}$$

Notes: The rate constant (k) decrease as $k_1 > k_2$;. $k_1 > k_3$.

The k_1 for the *C2'-selectivity* is about 3 ~ 2 orders of magnitude larger than the k_2 for the *C4''-selectivity*.

The k_1 for the **3a** is about 8 ~ 4 orders of magnitude larger than the k_3 for the **3a'**.

11. Activation strain analysis for the crucial reaction steps

Table S3. Activation Strain Analysis of Chemoselectivity-Determining and Diastereoselectivity-Determining Transition States (TSs, kcal mol^{-1}) and Typical Lengths of C2′=N or C3′′=C4′′ (Å) in the Cycloaddition Reactions between substrates Vinylethylene Carbonate **1a** and 5-Alkenyl Thiazolone **2a** Catalyzed by the $Pd(PPh_3)_4$ Catalyst.[a]

	products	attack sites	TSs	Lengths in 2a	Lengths in TSs	Stretching in TS	Stretching in TS (%)	$\Delta E^{\neq}_{dist}$ [substrate, 2a]	$\Delta E^{\neq}_{dist}$ [palladacyclic species, IM4]	$\Delta E^{\neq}_{dist}$	$\Delta\Delta E^{\neq}_{dist}$	$\Delta E^{\neq}_{int}$	$\Delta\Delta E^{\neq}_{int}$	$\Delta E^{\neq}$	$\Delta\Delta E^{\neq}$
chemoselectivity	**4a**	C4′′	**2-TS5-O**	1.355 (C3′′=C4′′)	1.402	0.047	3.5	9.4	34.4	43.8	2.4	-24.1	–6.6	19.7	–4.2
	3a	C2′	**1-TS5-N**	1.295 (C2′=N)	1.362	0.067	5.2	13.8	32.4	46.2		-30.7		15.5	
diastereoselectivity	**3a**	C2′	**1-TS6-1**	1.295 (C2′=N)	1.423	0.128	9.9	53.7	71.3	125.0	–1.1	–100.8	–8.9	24.2	–10.0
	3a′	C2′	**3-TS6-N**	1.295 (C2′=N)	1.413	0.118	9.1	54.7	71.4	126.1		–91.9		34.2	

[a]Chemo- and diastereoselectivity of palladium-catalyzed cyclization depends on the differences in distortion energies ($\Delta\Delta E_{dist}$) and interaction energies ($\Delta\Delta E_{int}$).[6] The difference of chemoselectivity is defined as $\Delta\Delta E_{dist}$ = ΔE_{dist}(C2′) - ΔE_{dist}(C4′′) and $\Delta\Delta E_{int}$ = ΔE_{int}(C2′) - ΔE_{int}(C4′′). The difference of diastereoselectivity is defined as $\Delta\Delta E_{dist}$ = ΔE_{dist}(**3a**) - ΔE_{dist}(**3a′**) and $\Delta\Delta E_{int}$ = ΔE_{int}(**3a**) - ΔE_{int}(**3a′**). A larger $\Delta\Delta E_{dist}$ signifies a more powerful influence of distortion energy. Conversely, a more negative value of $\Delta\Delta E_{int}$ indicates a more powerful influence of interaction energy.

Notes: As shown in Table S3, the activation energy $\Delta E^{\neq}$ of the chemoselectivity-determining TSs increases from 15.5 kcal mol^{-1} (3a) to 19.7 kcal mol^{-1} (4a). The total distortion energy ($\Delta E^{\neq}_{dist}$) decreases from 46.2 kcal mol^{-1} (3a) to 43.8 kcal mol^{-1} (4a). Substrate $\Delta E^{\neq}_{dist}$[2a] decreases from 13.8 kcal mol^{-1} (3a) to 9.4 kcal mol^{-1} (4a), whereas the palladacyclic intermediate $\Delta E^{\neq}_{dist}$[IM4] increases from 32.4 kcal mol^{-1} (3a) to 34.4 kcal mol^{-1} (4a). It is apparent that the distortion $\Delta E^{\neq}_{dist}$ makes in the reverse order as the activation energy $\Delta E^{\neq}$. Furthermore, the distortion $\Delta E^{\neq}_{dist}$[2a] correlates nearly with the distortion $\Delta E^{\neq}_{dist}$, which decreases in the same order. On the other hand, the stabilizing TS interaction $\Delta E^{\neq}_{int}$ increases from –30.7 kcal mol^{-1} (3a) to –24.1 kcal mol^{-1} (4a). Overall, the difference in activation energy ($\Delta\Delta E^{\neq}$ = –

4.2 kcal mol^{-1}) in the chemoselectivity-determining TSs originates mainly from the strengthening of the stabilizing TS interaction by –6.6 kcal mol^{-1}, whereas the difference in distortion energy ($\Delta\Delta E^{\neq}_{dist}$) by only 2.4 kcal mol^{-1}. Therefore, the stabilizing TS interaction $\Delta E^{\neq}_{int}$ correlates almost with the activation energy $\Delta E^{\neq}$. As a result, the stabilizing TS interaction energy ($\Delta E^{\neq}_{int}$) plays a central role in enhancing the chemoselectivity of palladium-catalyzed cyclization, in which $\Delta E^{\neq}_{int}$ favors *C2'-selectivity* over *C4''-selectivity*.

As shown in Table S3, for the diastereoselectivity-determining TSs (1-TS6-1 and 3-TS6-N), the formation of 3a has a much larger interaction advantage than that of 3a' by the $\Delta\Delta E^{\neq}_{int}$ of –8.9 kcal mol^{-1}. Moreover, the disadvantageous $\Delta\Delta E^{\neq}_{dist}$ is only –1.1 kcal mol^{-1}. Thus, the interaction between palladacyclic species and substrate is the significant factor that accounts for the highly diastereoselective (3+2) cyclization to give the sole product 3a.

12. Energies and Gibbs free energies for all species

Table S4. Zero-point energies (*ZPE*, hartree), thermal correction to Gibbs free energy (G_0, hartree), single-point energies (SP-E, hartree), total energies (E_c, hartree) corrected by the addition of *ZPE* and SP-E, sum of electronic and thermal free energies (G_c, hartree) with the addition of SP-E as well as *ZPE* and thermal corrections, and relative energies (ΔE, kcal mol^{-1}) and relative Gibbs free energies (ΔG, kcal mol^{-1}) of various species with respect to the initial reactants for the formation of possible coordinated complexes **L$_n$-Pd-1a** (L = PPh_3, n = 1-3) in the presence of $Pd(PPh_3)_4$ at the M06-L/6-311++G(d,p),SDD*(PCM-SMD,DCM)//M06-L/6-31G(d),SDD*(PCM-SMD,DCM) level under experimental temperature and pressure (298.15 K and 1 atm).

Species	*ZPE*	G_0	SP-E	E_c (ZPE + SP-E)	ΔE	G_c(G_0 + SP-E)	ΔG
1a	0.18921	0.15135	-650.95509	-650.76588		-650.80373	
$Pd(PPh_3)_4$	1.10192	0.99423	-4273.701901	-4272.59998		-4272.70767	
PPh_3	0.27445	0.22913	-1036.394892	-1036.12045		-1036.16576	
1a + $Pd(PPh_3)_4$	1.29113	1.14558	-4924.65699	-4923.36586	0.0	-4923.51141	0.0
L$_3$-Pd-1a	1.01860	0.91811	-3888.252248	-3887.23364		-3887.33414	
L$_3$-Pd-1a + PPh_3	1.29305	1.14724	-4924.64714	-4923.35409	7.4	-4923.49991	7.2
L$_2$-Pd-1a (**IM1**)	0.74158	0.65852	-2851.840138	-2851.09856		-2851.18162	
L$_2$-Pd-1a + 2PPh_3	1.29047	1.11678	-4924.62992	-4923.33946	16.6	-4923.51315	-1.1
L$_1$-Pd-1a	0.46517	0.40071	-1815.398564	-1814.93339		-1814.99786	
L$_1$-Pd-1a + 3PPh_3	1.28851	1.08809	-4924.58324	-4923.29474	44.6	-4923.49515	10.2

Table S5. Zero-point energies (*ZPE*, hartree), thermal correction to Gibbs free energy (G_0, hartree), single-point energies (SP-E, hartree), total energies (E_c, hartree) corrected by the addition of *ZPE* and SP-E, sum of electronic and thermal free energies (G_c, hartree) with the addition of SP-E as well as *ZPE* and thermal corrections, and relative energies (ΔE, kcal mol^{-1}) and relative Gibbs free energies (ΔG, kcal mol^{-1}) of various species with respect to the initial reactants for the formation of Pd-containing active species catalyzed by the $Pd(PPh_3)_4$ catalyst at the M06-L/6-311++G(d,p),SDD*(PCM-SMD,DCM)//M06-L/6-31G(d),SDD*(PCM-SMD,DCM) level under experimental temperature and pressure (298.15 K and 1 atm). IF represents the imaginary frequency of transition state.

Species	*ZPE*	G_0	SP-E	E_c (ZPE + SP-E)	ΔE	G_c(G_0 + SP-E)	ΔG	IF
1a	0.18921	0.15135	-650.95509	-650.76588		-650.80373		
$Pd(PPh_3)_4$	1.10192	0.99423	-4273.701901	-4272.59998		-4272.70767		
PPh_3	0.27445	0.22913	-1036.394892	-1036.12045		-1036.16576		
1a + $Pd(PPh_3)_4$	1.29113	1.14558	-4924.65699	-4923.36586	0.0	-4923.51141	0.0	
IM1	0.74158	0.65852	-2851.840138	-2851.09856		-2851.18162		
IM1 + $2PPh_3$	1.29047	1.11678	-4924.62992	-4923.33946	16.6	-4923.51315	-1.1	
TS1	0.74101	0.65807	-2851.83171	-2851.09070		-2851.17364		88.75*i*
TS1 + $2PPh_3$	1.28990	1.11632	-4924.62150	-4923.33159	21.5	-4923.50517	3.9	
IM2	0.74109	0.65886	-2851.85318	-2851.11209		-2851.19433		
IM2 + $2PPh_3$	1.28998	1.11711	-4924.64297	-4923.35299	8.1	-4923.52586	-9.1	
IM3a	0.74075	0.65660	-2851.85299	-2851.11225		-2851.19640		
IM3a + $2PPh_3$	1.28964	1.11485	-4924.64278	-4923.35314	8.0	-4923.52793	-10.4	
TS2a	0.73927	0.65649	-2851.84102	-2851.10176		-2851.18453		144.42*i*
TS2a + $2PPh_3$	1.28816	1.11475	-4924.63081	-4923.34265	14.6	-4923.51606	-2.9	
IM4	0.72557	0.64511	-2663.20544	-2662.47987		-2662.56033		
CO_2	0.01186	-0.00885	-188.63058	-188.61872		-188.63943		
IM4 + CO_2 + $2PPh_3$	1.28631	1.09451	-4924.62581	-4923.33949	16.5	-4923.53129	-12.5	
TS2b	0.73680	0.65331	-2851.82471	-2851.08790		-2851.17139		
TS2b + $2PPh_3$	1.28569	1.11157	-4924.61449	-4923.32880	23.3	-4923.50292	5.3	
IM4b	0.72435	0.64558	-2663.20544	-2662.48109		-2662.55986		
IM4b + CO_2 + $2PPh_3$	1.28510	1.09498	-4924.62581	-4923.34071	15.8	-4923.53082	-12.2	

Table S6. Zero-point energies (*ZPE*, hartree), thermal correction to Gibbs free energy (G_0, hartree), single-point energies (SP-E, hartree), total energies (E_c, hartree) corrected by the addition of *ZPE* and SP-E, sum of electronic and thermal free energies (G_c, hartree) with the addition of SP-E as well as *ZPE* and thermal corrections, and relative energies (ΔE, kcal mol^{-1}) and relative Gibbs free energies (ΔG, kcal mol^{-1}) of various species with respect to the **3a** for the isomers of product **3** at the M06-L/6-311++G(d,p),SDD*(PCM-SMD,DCM)//M06-L/6-31G(d),SDD*(PCM-SMD,DCM) level under experimental temperature and pressure (298.15 K and 1 atm).

Species	*ZPE*	G_0	SP-E	E_c (ZPE + SP-E)	ΔE	G_c(G_0 + SP-E)	ΔG
3a	0.39447	0.33739	-2066.55999	-2066.16553	0.0	-2066.22260	0.0
3a-1	0.39531	0.33943	-2066.56139	-2066.16608	-0.3	-2066.22197	0.4
3a'	0.39467	0.33791	-2066.55871	-2066.16403	0.9	-2066.22080	1.1
3a'-1	0.39476	0.33764	-2066.55301	-2066.15825	4.6	-2066.21537	4.5

Table S7. Zero-point energies (*ZPE*, hartree), thermal correction to Gibbs free energy (G_0, hartree), single-point energies (SP-E, hartree), total energies (E_c, hartree) corrected by the addition of *ZPE* and SP-E, sum of electronic and thermal free energies (G_c, hartree) with the addition of SP-E as well as *ZPE* and thermal corrections, and relative energies (ΔE, kcal mol^{-1}) and relative Gibbs free energies (ΔG, kcal mol^{-1}) of various species with respect to the **4a** for the isomers of product **4** at the M06-L/6-311++G(d,p),SDD*(PCM-SMD,DCM)//M06-L/6-31G(d),SDD*(PCM-SMD,DCM) level under experimental temperature and pressure (298.15 K and 1 atm).

Species	*ZPE*	G_0	SP-E	E_c (ZPE + SP-E)	ΔE	G_c(G_0 + SP-E)	ΔG
4a	0.39479	0.33763	-2066.56744	-2066.17265	-4.0	-2066.22981	0.0
4a-1	0.39454	0.33694	-2066.56655	-2066.17201	-3.6	-2066.22961	0.1
4a'	0.39488	0.33792	-2066.56109	-2066.16621	0.0	-2066.22317	4.2
4a'-1	0.39578	0.33903	-2066.55235	-2066.15657	6.0	-2066.21331	10.4
4a''	0.39484	0.33789	-2066.56783	-2066.17299	-4.3	-2066.22970	0.1
4a''-1	0.39576	0.33939	-2066.56858	-2066.17282	-4.1	-2066.22920	0.4
4a'''	0.39541	0.33921	-2066.55998	-2066.16458	1.0	-2066.22077	5.7
4a'''-1	0.39518	0.33809	-2066.56138	-2066.16621	0.0	-2066.22330	4.1

Table S8. Zero-point energies (*ZPE*, hartree), thermal correction to Gibbs free energy (G_0, hartree), single-point energies (SP-E, hartree), total energies (E_c, hartree) corrected by the addition of *ZPE* and SP-E, sum of electronic and thermal free energies (G_c, hartree) with the addition of SP-E as well as *ZPE* and thermal corrections, and relative energies (ΔE, kcal mol^{-1}) and relative Gibbs free energies (ΔG, kcal mol^{-1}) of various species with respect to the initial reactants for the C2'–O5 formation between palladacyclic intermediate and 5-alkenyl thiazolone **2a** along *C2'-selectivity* reaction pathways at the M06-L/6-311++G(d,p),SDD*(PCM-SMD,DCM)//M06-L/6-31G(d),SDD*(PCM-SMD,DCM) level under experimental temperature and pressure (298.15 K and 1 atm).

Species	*ZPE*	G_0	SP-E	E_c (ZPE + SP-E)	ΔE	G_c(G_0 + SP-E)	ΔG	IF
1a	0.18921	0.15135	-650.95509	-650.76588		-650.80373		
2a	0.21766	0.17086	-1604.22306	-1604.00540		-1604.05220		
$Pd(PPh_3)_4$	1.10192	0.99423	-4273.70190	-4272.59998		-4272.70767		
PPh_3	0.27445	0.22913	-1036.39489	-1036.12045		-1036.16576		
CO_2	0.01186	-0.00885	-188.63058	-188.61872		-188.63943		
1a + **2a** + $Pd(PPh_3)_4$	1.50879	1.31644	-6528.88005	-6527.37126	0.0	-6527.56361	0.0	
1-IM5-O	0.66854	0.58542	-3231.01215	-3230.34361		-3230.42673		
1-IM5-O + $3PPh_3$ + CO_2	1.50373	1.26395	-6528.82740	-6527.32367	29.9	-6527.56346	0.1	
1-TS5-O	0.66704	0.58601	-3230.98972	-3230.32268		-3230.40371		90.43*i*
1-TS5-O + $3PPh_3$ + CO_2	1.50223	1.26454	-6528.80497	-6527.30274	43.0	-6527.54043	14.5	
1-IM6-O	0.66942	0.58912	-3231.01469	-3230.34527		-3230.42557		
1-IM6-O + $3PPh_3$ + CO_2	1.50461	1.26765	-6528.82995	-6527.32533	28.8	-6527.56230	0.8	
1-IM5-N	0.66880	0.58684	-3231.02155	-3230.35275		-3230.43471		
1-IM5-N + $3PPh_3$ + CO_2	1.50399	1.26537	-6528.83681	-6527.33282	24.1	-6527.57144	-4.9	
1-TS5-N	0.66795	0.58592	-3231.00801	-3230.34006		-3230.42210		281.47*i*
1-TS5-N + $3PPh_3$ + CO_2	1.50315	1.26445	-6528.82327	-6527.32012	32.1	-6527.55882	3.0	
1-IM6-N	0.67024	0.59135	-3231.02393	-3230.35369		-3230.43259		
1-IM6-N + $3PPh_3$ + CO_2	1.50543	1.26988	-6528.83919	-6527.33376	23.5	-6527.56931	-3.6	
1-IM5-S	0.67078	0.59075	-3231.01496	-3230.34419		-3230.42421		
1-IM5-S + $3PPh_3$ + CO_2	1.50597	1.26929	-6528.83022	-6527.32425	29.5	-6527.56094	1.7	
1-TS5-S	0.66947	0.59142	-3231.00844	-3230.33897		-3230.41703		260.14*i*
1-TS5-S + $3PPh_3$ + CO_2	1.50466	1.26995	-6528.82370	-6527.31903	32.8	-6527.55375	6.2	
1-IM6-S	0.66944	0.58929	-3231.01084	-3230.34140		-3230.42155		
1-IM6-S + $3PPh_3$ + CO_2	1.50463	1.26782	-6528.82610	-6527.32147	31.2	-6527.55828	3.3	

Table S9. Zero-point energies (*ZPE*, hartree), thermal correction to Gibbs free energy (G_0, hartree), single-point energies (SP-E, hartree), total energies (E_c, hartree) corrected by the addition of *ZPE* and SP-E, sum of electronic and thermal free energies (G_c, hartree) with the addition of SP-E as well as *ZPE* and thermal corrections, and relative energies (ΔE, kcal mol^{-1}) and relative Gibbs free energies (ΔG, kcal mol^{-1}) of various species with respect to the initial reactants for the C3–N bond formation to form products **3a** between palladacyclic intermediate and 5-alkenyl thiazolone **2a** along *C2'-selectivity* reaction pathways at the M06-L/6-311++G(d,p),SDD*(PCM-SMD,DCM)//M06-L/6-31G(d),SDD*(PCM-SMD,DCM) level under experimental temperature and pressure (298.15 K and 1 atm).

Species	*ZPE*	G_0	SP-E	E_c (ZPE + SP-E)	ΔE	G_c(G_0 + SP-E)	ΔG	IF
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$Pd(PPh_3)_4$	1.10192	0.99423	-4273.70190	-4272.59998		-4272.70767		
PPh_3	0.27445	0.22913	-1036.39489	-1036.12045		-1036.16576		
CO_2	0.01186	-0.00885	-188.63058	-188.61872		-188.63943		
1a + **2a** + $Pd(PPh_3)_4$	1.50879	1.31644	-6528.88005	-6527.37126	0.0	-6527.56361	0.0	
1-IM7-1	0.67157	0.59283	-3231.02449	-3230.35292		-3230.43166		
1-IM7-1 + $3PPh_3$ + CO_2	1.50676	1.27136	-6528.83975	-6527.33298	24.0	-6527.56839	-3.0	
1-IM7-1a	0.66978	0.58688	-3231.01249	-3230.34271		-3230.42561		
1-IM7-1a + $3PPh_3$ + CO_2	1.50497	1.26541	-6528.82775	-6527.32278	30.4	-6527.56234	0.8	
1-TS6-1	0.66925	0.58778	-3230.99559	-3230.32634		-3230.40781		300.36*i*
1-TS6-1 + $3PPh_3$ + CO_2	1.50445	1.26632	-6528.81085	-6527.30640	40.7	-6527.54453	12.0	
1-IM8-1	0.67142	0.59012	-3231.00941	-3230.33799		-3230.41929		
1-IM8-1 + $3PPh_3$ + CO_2	1.50661	1.26865	-6528.82467	-6527.31806	33.4	-6527.55601	4.8	
1-IM7-2	0.66919	0.58416	-3230.99170	-3230.32251		-3230.40755		
1-IM7-2 + $3PPh_3$ + CO_2	1.50438	1.26269	-6528.80696	-6527.30258	43.1	-6527.54427	12.1	
1-TS6-2	0.66777	0.58122	-3230.98248	-3230.31471		-3230.40125		269.22*i*
1-TS6-2 + $3PPh_3$ + CO_2	1.50296	1.25975	-6528.79773	-6527.29477	48.0	-6527.53798	16.1	
1-IM8-2	0.67055	0.58644	-3230.99996	-3230.32941		-3230.41352		
1-IM8-2 + $3PPh_3$	1.50574	1.26497	-6528.81522	-6527.30947	38.8	-6527.55025	8.4	
3a	0.39447	0.33739	-2066.55999	-2066.16553		-2066.22260		
3a + CO_2 + $Pd(PPh_3)_4$	1.50824	1.32277	-6528.89248	-6527.38423	-8.1	-6527.56971	-3.8	

Continued Table S9

Species	*ZPE*	G_0	SP-E	E_c (ZPE + SP-E)	Δ*E*	G_c(G_0 + SP-E)	Δ*G*	IF
1-TS6-3	0.66915	0.58898	-3230.98770	-3230.31855		-3230.39872		
1-TS6-3 + $3PPh_3 + CO_2$	1.50434	1.26751	-6528.80295	-6527.29861	45.6	-6527.53545	17.7	
1-IM8-3	0.67146	0.59049	-3231.00809	-3230.33663		-3230.41760		
1-IM8-3 + $3PPh_3 + CO_2$	1.50665	1.26902	-6528.82335	-6527.31669	34.2	-6527.55433	5.8	
3a-1	0.39531	0.33943	-2066.56139	-2066.16608		-2066.22197		
3a-1 + CO_2 + $Pd(PPh_3)_4$	1.50909	1.32480	-6528.89387	-6527.38478	-8.5	-6527.56907	-3.4	
3a	0.39447	0.33739	-2066.55999	-2066.16553		-2066.22260		
3a + CO_2 + $Pd(PPh_3)_4$	1.50824	1.32277	-6528.89248	-6527.38423	-8.1	-6527.56971	-3.8	

Table S10. Zero-point energies (*ZPE*, hartree), thermal correction to Gibbs free energy (G_0, hartree), single-point energies (SP-E, hartree), total energies (E_c, hartree) corrected by the addition of *ZPE* and SP-E, sum of electronic and thermal free energies (G_c, hartree) with the addition of SP-E as well as *ZPE* and thermal corrections, and relative energies (ΔE, kcal mol^{-1}) and relative Gibbs free energies (ΔG, kcal mol^{-1}) of various species with respect to the initial reactants for the formation of product **3a'** between palladacyclic intermediate and 5-alkenyl thiazolone **2a** along *C2'-selectivity* reaction pathways at the M06-L/6-311++G(d,p),SDD*(PCM-SMD,DCM)//M06-L/6-31G(d),SDD*(PCM-SMD,DCM) level under experimental temperature and pressure (298.15 K and 1 atm).

Species	*ZPE*	G_0	SP-E	E_c (ZPE + SP-E)	ΔE	G_c(G_0 + SP-E)	ΔG	IF
1a	0.18921	0.15135	-650.95509	-650.76588		-650.80373		
2a	0.21766	0.17086	-1604.22306	-1604.00540		-1604.05220		
$Pd(PPh_3)_4$	1.10192	0.99423	-4273.70190	-4272.59998		-4272.70767		
PPh_3	0.27445	0.22913	-1036.39489	-1036.12045		-1036.16576		
CO_2	0.01186	-0.00885	-188.63058	-188.61872		-188.63943		
1a + **2a** + $Pd(PPh_3)_4$	1.50879	1.31644	-6528.88005	-6527.37126	0.0	-6527.56361	0.0	
3-IM5-N	0.66783	0.58400	-3231.01637	-3230.34854		-3230.43237		
3-IM5-N + $3PPh_3$ + CO_2	1.50302	1.26254	-6528.83163	-6527.32860	26.8	-6527.56909	-3.4	
3-TS5-N	0.66872	0.58774	-3231.00453	-3230.33581		-3230.41679		269.51*i*
3-TS5-N + $3PPh_3$ + CO_2	1.50391	1.26627	-6528.81978	-6527.31587	34.8	-6527.55351	6.3	
3-IM6-N	0.67044	0.58941	-3231.02659	-3230.35615		-3230.43719		
3-IM6-N + $3PPh_3$ + CO_2	1.50563	1.26794	-6528.84185	-6527.33622	22.0	-6527.57391	-6.5	
3-TS6-N	0.66783	0.58499	-3230.97819	-3230.31036		-3230.39319		335.27*i*
3-TS6-N + $3PPh_3$ + CO_2	1.50302	1.26353	-6528.79345	-6527.29042	50.7	-6527.52992	21.1	
3-IM8-N	0.67024	0.59014	-3230.98488	-3230.31464		-3230.39474		
3-IM8-N + $3PPh_3$ + CO_2	1.50543	1.26867	-6528.80014	-6527.29470	48.0	-6527.53146	20.2	
3-IM7-2	0.66998	0.58692	-3230.98501	-3230.31504		-3230.39810		
3-IM7-2 + $3PPh_3$ + CO_2	1.50517	1.26545	-6528.80027	-6527.29510	47.8	-6527.53482	18.1	
3-TS6-2	0.66888	0.58629	-3230.97622	-3230.30734		-3230.38993		225.11*i*
3-TS6-2 + $3PPh_3$ + CO_2	1.50407	1.26483	-6528.79148	-6527.28741	52.6	-6527.52666	23.2	
3-IM8-2	0.67026	0.58586	-3230.99554	-3230.32528		-3230.40968		
3-IM8-2 + $3PPh_3$ + CO_2	1.50545	1.26439	-6528.81080	-6527.30535	41.4	-6527.54641	10.8	
3a'	0.39467	0.33791	-2066.55871	-2066.16403		-2066.22080		
3a' + CO_2 + $Pd(PPh_3)_4$	1.50845	1.32328	-6528.89119	-6527.38274	-7.2	-6527.56791	-2.7	

Table S11. Zero-point energies (*ZPE*, hartree), thermal correction to Gibbs free energy (G_0, hartree), single-point energies (SP-E, hartree), total energies (E_c, hartree) corrected by the addition of *ZPE* and SP-E, sum of electronic and thermal free energies (G_c, hartree) with the addition of SP-E as well as *ZPE* and thermal corrections, and relative energies (ΔE, kcal mol^{-1}) and relative Gibbs free energies (ΔG, kcal mol^{-1}) of various species with respect to the initial reactants for the C4''–O5 and C3–C3'' bonds formation to from product **4a** between palladacyclic intermediate and 5-alkenyl thiazolone **2a** along *C4''-selectivity* reaction pathways at the M06-L/6-311++G(d,p),SDD*(PCM-SMD,DCM)//M06-L/6-31G(d),SDD*(PCM-SMD,DCM) level under experimental temperature and pressure (298.15 K and 1 atm).

Species	*ZPE*	G_0	SP-E	E_c (ZPE + SP-E)	ΔE	G_c(G_0 + SP-E)	ΔG	IF
1a	0.18921	0.15135	-650.95509	-650.76588		-650.80373		
2a	0.21766	0.17086	-1604.22306	-1604.00540		-1604.05220		
$Pd(PPh_3)_4$	1.10192	0.99423	-4273.70190	-4272.59998		-4272.70767		
PPh_3	0.27445	0.22913	-1036.39489	-1036.12045		-1036.16576		
CO_2	0.01186	-0.00885	-188.63058	-188.61872		-188.63943		
1a + **2a** + $Pd(PPh_3)_4$	1.50879	1.31644	-6528.88005	-6527.37126	0.0	-6527.56361	0.0	
2-IM5-O	0.66790	0.58334	-3231.00615	-3230.33826		-3230.42281		
2-IM5-O + $3PPh_3$ + CO_2	1.50309	1.26187	-6528.82141	-6527.31832	33.2	-6527.55954	2.6	
2-TS5-O	0.66845	0.58556	-3231.00182	-3230.33337		-3230.41625		164.69*i*
2-TS5-O + $3PPh_3$ + CO_2	1.50364	1.26410	-6528.81707	-6527.31344	36.3	-6527.55298	6.7	
2-IM6-O	0.67085	0.58884	-3231.02388	-3230.35303		-3230.43504		
2-IM6-O + $3PPh_3$ + CO_2	1.50604	1.26737	-6528.83914	-6527.33309	23.9	-6527.57177	-5.1	
2-IM7-1	0.67056	0.59252	-3231.01714	-3230.34658		-3230.42462		
2-IM7-1 + $3PPh_3$ + CO_2	1.50575	1.27105	-6528.83239	-6527.32664	28.0	-6527.56134	1.4	
2-TS6-1	0.67041	0.59192	-3230.99366	-3230.32325		-3230.40174		262.48*i*
2-TS6-1 + $3PPh_3$ + CO_2	1.50560	1.27046	-6528.80892	-6527.30331	42.6	-6527.53846	15.8	
2-IM8-1	0.67251	0.59374	-3231.01940	-3230.34689		-3230.42566		
2-IM8-1 + $3PPh_3$ + CO_2	1.50770	1.27227	-6528.83466	-6527.32696	27.8	-6527.56238	0.8	
2-IM7-2	0.66940	0.58429	-3230.98604	-3230.31664		-3230.40176		
2-IM7-2 + $3PPh_3$ + CO_2	1.50460	1.26282	-6528.80130	-6527.29670	46.8	-6527.53848	15.8	
2-TS6-2	0.66996	0.58687	-3230.98204	-3230.31208		-3230.39518		180.92*i*
2-TS6-2 + $3PPh_3$ + CO_2	1.50515	1.26540	-6528.79730	-6527.29215	49.6	-6527.53190	19.9	

Continued Table S11

Species	*ZPE*	G_0	SP-E	E_c (ZPE + SP-E)	Δ*E*	G_c(G_0 + SP-E)	Δ*G*	IF
2-IM8-2	0.67168	0.58908	-3231.00865	-3230.33697		-3230.41957		
2-IM8-2 + $3PPh_3 + CO_2$	1.50687	1.26761	-6528.82391	-6527.31704	34.0	-6527.55630	4.6	
2-IM7-3	0.67016	0.58888	-3230.99347	-3230.32331		-3230.40460		
2-IM7-3 + $3PPh_3 + CO_2$	1.50536	1.26741	-6528.80873	-6527.30337	42.6	-6527.54132	14.0	
2-TS6-3	0.66948	0.58902	-3230.97627	-3230.30679		-3230.38725		290.51*i*
2-TS6-3 + $3PPh_3 + CO_2$	1.50467	1.26755	-6528.79153	-6527.28686	53.0	-6527.52398	24.9	
2-IM8-3	0.67049	0.58592	-3230.99314	-3230.32266		-3230.40723		
2-IM8-3 + $3PPh_3 + CO_2$	1.50568	1.26445	-6528.80840	-6527.30272	43.0	-6527.54395	12.3	
2-IM5-S	0.66843	0.58702	-3231.01890	-3230.35047		-3230.43188		
2-IM5-S + $3PPh_3 + CO_2$	1.50363	1.26555	-6528.83416	-6527.33054	25.6	-6527.56861	-3.1	
2-TS5-S	0.66923	0.59159	-3231.00028	-3230.33105		-3230.40869		300.48*i*
2-TS5-S + $3PPh_3 + CO_2$	1.50442	1.27012	-6528.81554	-6527.31112	37.7	-6527.54542	11.4	
4a	0.39479	0.33763	-2066.56744	-2066.17265		-2066.22981		
4a + CO_2 + $Pd(PPh_3)_4$	1.50857	1.32301	-6528.89992	-6527.39136	-12.6	-6527.57692	-8.4	

13. A supplement for the Computational details section

13.1 Activity index analysis

Based on the highest occupied molecular orbital (HOMO) energy obtained within the Kohn-Sham scheme[7], the electrophilicity index ω and nucleophilicity N index are defined as[8]:

$$\omega = \frac{\mu^2}{2\eta} \quad \text{(eV)} \qquad \text{(S1)}$$

$$N = E_{HOMO(Nu)}\ \text{(eV)} - E_{HOMO(TCE)}\ \text{(eV)} \qquad \text{(S2)}$$

where the electronic chemical potential μ and the chemical hardness η are defined as $\mu = (\varepsilon_{HOMO} + \varepsilon_{LUMO})/2$ and $\eta = (\varepsilon_{LUMO} - \varepsilon_{HOMO})$, respectively. The tetracyanoethylene (TCE) acts as reference.

The corresponding local electrophilicity ω_κ and local nucleophilicity N_κ indices are defined as:

$$\omega_\kappa = \omega P_\kappa^+ \qquad \text{(S3)}$$

$$N_\kappa = N P_\kappa^- \qquad \text{(S4)}$$

where the atom κ electrophilic Parr function P_κ^+ and nucleophilic Parr function P_κ^- were obtained through the Mülliken atomic spin density (ASD) analysis at the radical anion and radical cation of the corresponding reactants, respectively[9].

13.2 Turnover frequency (TOF) analysis and Rate constants *k*(T)

The turnover frequency (TOF) of the catalytic cycle determines the efficiency of the catalyst. Based on the transition state theory,[10] TOF can be calculated by Eqs. (S5) and (S6),[11] in which δE (the energy span[12]) is defined as the energy difference between the summit and trough of the catalytic cycle. G_{TDTS} and G_{TDI} are the Gibbs free energies of the TOF determining transition state (TDTS) and the TOF determining intermediate (TDI), and ΔG_r is the global free energy of the whole cycle.

$$\mathrm{TOF} = \frac{k_B T}{h} e^{-\frac{\delta E}{RT}} \tag{S5}$$

$$\delta E = \begin{pmatrix} G_{TDTS} - G_{TDI} & \text{if TDTS appears after TDI} \\ G_{TDTS} - G_{TDI} + \Delta G_r & \text{if TDTS appears before TDI} \end{pmatrix} \tag{S6}$$

where k_B is the Boltzmann constant, T is the absolute temperature, and h is the Planck constant. G_{TDTS} and G_{TDI} are the Gibbs free energies of the TOF determining transition state (TDTS) and the TOF determining intermediate (TDI), and ΔG_r is the global free energy of the whole cycle.

The rate constants k(T) have been evaluated over the 278 ~ 338 K temperature range, according to conventional transition state theory (TST) k'(T), including tunneling correction κ(T), based on Winger's formulation as follows[10a]:

$$k'(T) = \frac{k_B T}{hc^0} e^{\frac{-\Delta G^{\neq}}{RT}} \tag{S7}$$

$$\kappa(T) = 1 + \frac{1}{24}\left|h\omega^{\neq}\beta\right|^2 = 1 + \frac{1}{24}\left|\frac{\mathrm{h}\omega^{\neq}}{k_B T}\right|^2 \tag{S8}$$

$$k(T) = k'(T) * \kappa(T) \tag{S9}$$

where k_B is the Boltzmann constant, 1.3807×10^{-23} J K^{-1}. T is the absolute temperature (K). h is the Planck constant, 6.626×10^{-34} J S, $\mathrm{h} = \frac{h}{2\pi} = 1.05510^{-34}$ J S. c^0 is the standard concentration (1 mol dm^{-3}). $\Delta G^{\neq}$ is the activation Gibbs free energy barrier (J mol^{-1}). $\omega^{\neq}$ is the imaginary frequency of transient states (cm^{-1}).

13.3 Activation strain-distortion/interaction model analysis

To gain insight into the physical factors controlling the chemoselectivity of palladium-catalyzed cyclization, activation strain model (ASM) or distortion/interaction model analysis[13] for the key transition states is performed at the M06-L/6-311++G(d,p),SDD*(PCM-SMD,DCM)//M06-L/6-31G(d),SDD*(PCM-SMD,DCM) level. The height of the activation barriers and trends in reactivity upon changing the structure of the reactants are analysed using the activation strain model (ASM) of chemical reactivity.[13]

In this model, the activation energies $\Delta E^{\neq}$ of transition state (TS) are decomposed into the activation strain $E^{\neq}_{strain}$ (or distortion energies $E^{\neq}_{dist}$) and the stabilizing TS interaction energies $\Delta E^{\neq}_{int}$:

$$\Delta E^{\neq} = \Delta E^{\neq}_{strain} + \Delta E^{\neq}_{int} \qquad \text{(S10)}$$

The activation strain $\Delta E^{\neq}_{strain}$ (or $E^{\neq}_{dist}$) is the strain energy associated with deforming the reactants from their equilibrium geometry to the geometry they adopt in the TS (the energy penalty for distorting the reactants into the transition state geometry). $\Delta E^{\neq}_{strain}$ is typically a positive value, that is destabilizing, and thus a factor that gives rise to the activation barrier. The stabilizing TS interaction energies $\Delta E^{\neq}_{int}$ is the actual interaction energy between the deformed reactants in the TS. $\Delta E^{\neq}_{int}$ is a negative value, that is stabilizing, and therefore a factor that counteracts the strain term $\Delta E^{\neq}_{strain}$ and causes the eventual height of the reaction barrier to become lower than if strain were the only factor[3].

14. Cartesian coordinates of all the optimized structures

1a

6	-1.237320	0.496819	1.433997
6	-0.585148	0.381600	0.046039
1	-0.729775	-0.120830	2.184273
1	-1.324754	1.524213	1.794856
8	-2.557968	-0.024185	1.232519
6	-0.857769	1.602824	-0.792272
6	0.054930	2.316894	-1.446389
1	-1.912004	1.889632	-0.830919
6	0.860913	-0.033140	0.076968
6	1.381165	-0.895969	-0.890070
6	1.712979	0.505870	1.044834
6	2.732992	-1.230938	-0.875336
1	0.723498	-1.311602	-1.650894
6	3.065716	0.175729	1.053489
1	1.320012	1.193220	1.794693
6	3.578190	-0.696544	0.095032
1	3.126636	-1.912136	-1.627673
1	3.719651	0.600005	1.813273
1	4.634546	-0.958484	0.104198
6	-2.556122	-0.806854	0.133820
8	-1.390451	-0.704440	-0.534208
8	-3.477394	-1.499716	-0.207079
1	1.114330	2.063635	-1.428380
1	-0.229815	3.192500	-2.025987

2a

6	2.455616	0.474717	0.002523
6	0.097632	1.217063	0.000897
6	1.141679	2.288919	0.006894
7	2.440235	1.769618	0.007596
8	0.889225	3.483978	0.010763
16	0.867536	-0.352823	-0.004013
6	-1.218202	1.538981	0.001475
6	-2.414994	0.731777	-0.002624
6	-3.652812	1.406428	0.004059
6	-2.434543	-0.676585	-0.013642
6	-4.856817	0.720190	0.001008
1	-3.660523	2.495252	0.012132
6	-3.629692	-1.378471	-0.017071
1	-1.510981	-1.250226	-0.019879
6	-4.831389	-0.672178	-0.009748
1	-5.802096	1.256079	0.006658
1	-3.630853	-2.465105	-0.025504
1	-1.384300	2.619091	0.006513
6	3.674719	-0.320003	0.002075
6	3.641375	-1.722947	-0.007622
6	4.916787	0.338747	0.010978
6	4.822857	-2.451777	-0.008291
1	2.689392	-2.253128	-0.014782
6	6.093949	-0.394987	0.010490
1	4.935500	1.426033	0.018420
6	6.050335	-1.790056	0.000627
1	4.786502	-3.538847	-0.015887
1	7.051840	0.121106	0.017700
1	6.975554	-2.363175	0.000105
17	-6.336017	-1.556771	-0.013868

3a

6	0.899515	0.390454	0.840193
6	-1.324399	-0.584501	-0.171428
6	-0.093379	-1.299221	-0.613388
7	1.043893	-0.753771	-0.047348
8	-0.088780	-2.247390	-1.385440
16	-0.978790	0.583727	1.082348
6	-2.511817	-0.947939	-0.712340
6	-3.861238	-0.498168	-0.456723
6	-4.905256	-1.139425	-1.154363
6	-4.211707	0.532100	0.437554
6	-6.232568	-0.784073	-0.973182
1	-4.659571	-1.938348	-1.852670
6	-5.535617	0.902415	0.628728
1	-3.448251	1.074141	0.990499
6	-6.535306	0.238450	-0.077357
1	-7.023965	-1.292589	-1.517412
1	-5.788345	1.702844	1.319164
1	-2.415382	-1.734296	-1.463503
17	-8.204236	0.701365	0.160711
6	2.188625	-1.560918	0.477614
6	2.170121	-3.002681	0.059363
1	2.227751	-3.171980	-1.013753
6	2.207753	-4.028367	0.909371
1	2.173130	-3.905150	1.991269
1	2.284942	-5.050433	0.543983

6	1.471980	1.675536	0.272319
6	2.497164	2.355264	0.930230
6	1.016188	2.144055	-0.963912
6	3.066647	3.488762	0.351413
1	2.858370	1.987270	1.886843
6	1.592209	3.267876	-1.543210
1	0.215758	1.615176	-1.482846
6	2.621593	3.944051	-0.886158
1	3.868290	4.011084	0.870569
1	1.237191	3.618288	-2.510695
1	3.072865	4.824516	-1.340492
6	3.501562	-0.940635	-0.006478
6	4.657329	-0.995315	0.776174
6	3.569458	-0.355515	-1.274233
6	5.848306	-0.437964	0.315837
1	4.637934	-1.477562	1.753021
6	4.759435	0.199390	-1.735931
1	2.672097	-0.316116	-1.891259
6	5.901735	0.168270	-0.937305
1	6.737258	-0.476270	0.942913
1	4.790320	0.664920	-2.719897
1	6.831484	0.608167	-1.293656
8	1.552091	0.056810	2.025949
6	1.914913	-1.323308	1.964580
1	1.079062	-1.955273	2.299602
1	2.767443	-1.462251	2.632418

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6	0.966130	0.342800	0.963445
6	-1.222065	-0.636239	-0.106551
6	0.025492	-1.328934	-0.542555
7	1.130958	-0.802845	0.088635
8	0.063947	-2.244123	-1.353477
16	-0.915241	0.488868	1.200740
6	-2.392810	-0.985843	-0.690166
6	-3.751647	-0.552039	-0.455394
6	-4.775124	-1.190924	-1.184748
6	-4.129192	0.461765	0.446500
6	-6.109048	-0.850324	-1.024820
1	-4.508073	-1.976497	-1.890409
6	-5.459925	0.818081	0.615623
1	-3.381027	1.003376	1.020632
6	-6.439075	0.155653	-0.120064
1	-6.884905	-1.357329	-1.592458
1	-5.734162	1.606419	1.311825
1	-2.272285	-1.747534	-1.463066
17	-8.116622	0.599091	0.092312
6	2.319244	-1.567178	0.571313
6	2.228406	-3.039586	0.280970
1	1.295606	-3.509962	0.593141
6	3.217620	-3.781830	-0.212538
1	4.169145	-3.355155	-0.527324
1	3.103428	-4.858266	-0.320616
6	1.518399	1.630772	0.376656
6	2.562632	2.306333	1.008608
6	1.038224	2.099208	-0.850622
6	3.129417	3.431973	0.412942
1	2.943409	1.938672	1.957577
6	1.609076	3.218292	-1.445023
1	0.223373	1.575908	-1.352707
6	2.658779	3.888233	-0.814596
1	3.948378	3.947476	0.911574
1	1.234547	3.569177	-2.404926
1	3.106952	4.763251	-1.282316
6	3.575711	-0.911441	0.012971
6	4.728439	-0.716479	0.774854
6	3.576505	-0.511256	-1.328054
6	5.849879	-0.104595	0.214545
1	4.763231	-1.032526	1.816073
6	4.695387	0.092906	-1.890144
1	2.679559	-0.668082	-1.927610
6	5.835624	0.306391	-1.115454
1	6.736831	0.053666	0.825753
1	4.676438	0.401813	-2.933838
1	6.710242	0.787984	-1.549506
8	1.634422	0.033788	2.146721
6	2.080894	-1.320186	2.070389
1	1.300796	-2.002681	2.438599
1	2.964521	-1.411684	2.704704

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6	-1.425911	1.183082	-0.558576
6	0.590338	-0.290872	0.193127
6	-0.707783	-0.658859	0.837467
7	-1.756947	0.068127	0.300000
8	-0.831751	-1.502548	1.711512
16	0.348324	0.747559	-1.198732
6	1.728853	-0.835733	0.686340

6	3.107144	-0.731792	0.263468	**3a'-1**			
6	4.070867	-1.452518	0.998428	6	1.018196	0.217638	0.846496
6	3.560284	0.037769	-0.825800	6	-1.267550	-0.661052	-0.103658
6	5.418056	-1.412962	0.674970	6	-0.080727	-1.452726	-0.542552
1	3.745974	-2.055690	1.845237	7	1.103737	-0.942683	-0.023985
6	4.905869	0.089982	-1.162344	8	-0.156124	-2.419019	-1.284111
1	2.862334	0.618993	-1.423636	16	-0.847406	0.524891	1.104346
6	5.823339	-0.636681	-0.408031	6	-2.480487	-0.980830	-0.615280
1	6.145819	-1.974669	1.254884	6	-3.799828	-0.449369	-0.358778
1	5.239046	0.691240	-2.004265	6	-4.888014	-1.063956	-1.011839
1	1.555435	-1.475006	1.554381	6	-4.080857	0.639093	0.490295
17	7.520725	-0.568878	-0.824624	6	-6.191016	-0.627338	-0.832722
6	-3.076434	-0.490603	-0.122812	1	-4.695930	-1.905835	-1.675527
6	-1.335429	2.533571	0.111879	6	-5.379539	1.091654	0.678045
6	-1.619608	3.688685	-0.620517	1	-3.281492	1.162533	1.009048
6	-0.935505	2.645861	1.446140	6	-6.424059	0.452924	0.014927
6	-1.515076	4.940308	-0.020087	1	-7.015884	-1.115824	-1.344624
1	-1.928285	3.606590	-1.660382	1	-5.578698	1.936139	1.332644
6	-0.834428	3.898947	2.043193	1	-2.438486	-1.797592	-1.338327
1	-0.714921	1.751992	2.028665	17	-8.061033	1.025459	0.241545
6	-1.124558	5.050048	1.313048	6	2.232357	-1.783450	0.534940
1	-1.745373	5.833709	-0.597689	6	1.621156	1.482514	0.279221
1	-0.532599	3.972926	3.086396	6	2.266329	2.394680	1.116698
1	-1.046650	6.029016	1.782372	6	1.509058	1.756932	-1.085904
8	-2.373066	1.217805	-1.564779	6	2.798242	3.568759	0.588962
6	-3.021561	-0.052147	-1.600971	1	2.362736	2.176839	2.178095
1	-2.440043	-0.757178	-2.209992	6	2.046284	2.928202	-1.609878
1	-4.006919	0.094566	-2.050572	1	1.007986	1.044169	-1.740297
6	-4.203220	0.225508	0.579721	6	2.691705	3.838658	-0.773712
6	-3.170053	-2.005712	-0.012645	1	3.303762	4.272764	1.247876
6	-4.182837	-2.611284	0.734115	1	1.963190	3.129017	-2.676587
6	-2.258057	-2.824578	-0.692046	1	3.111868	4.755061	-1.184312
6	-4.295949	-3.999639	0.786590	8	1.649525	-0.121286	2.046464
1	-4.890838	-1.995786	1.285435	6	1.936904	-1.518174	2.009921
6	-2.364561	-4.208963	-0.633678	1	1.059649	-2.093924	2.339440
1	-1.440584	-2.379944	-1.260594	1	2.769392	-1.703696	2.693387
6	-3.390118	-4.803105	0.101772	6	3.532237	-1.158265	0.069814
1	-5.096379	-4.451334	1.369973	6	2.222759	-3.244978	0.130299
1	-1.642337	-4.826303	-1.165146	6	2.473730	-3.611481	-1.199187
1	-3.476746	-5.887353	0.143057	6	2.076724	-4.254180	1.085153
1	-5.184213	0.076420	0.124113	6	2.554584	-4.947938	-1.565465
6	-4.074968	0.990033	1.660080	1	2.575993	-2.839309	-1.959324
1	-4.935118	1.481231	2.110350	6	2.163029	-5.597802	0.718734
1	-3.107823	1.148201	2.136629	1	1.901399	-4.008528	2.130372

6	2.399051	-5.949399	-0.605390
1	2.738722	-5.210834	-2.605747
1	2.046019	-6.368114	1.478829
1	2.463860	-6.997733	-0.891611
1	3.650187	-1.146437	-1.014987
6	4.491793	-0.651821	0.840385
1	5.397855	-0.240314	0.399814
1	4.426665	-0.614761	1.926962

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6	1.467123	-2.974180	-0.262026
6	1.715974	-1.625244	0.444414
8	0.058276	-3.079471	-0.327763
6	1.326774	-1.817654	1.895481
6	2.097695	-1.633336	2.966054
1	0.310850	-2.199155	2.032244
6	3.129969	-1.102474	0.296419
6	4.165825	-1.934130	-0.138705
6	3.440590	0.217035	0.649504
6	5.471818	-1.456679	-0.236651
1	3.962363	-2.969978	-0.404662
6	4.742413	0.697965	0.547352
1	2.655437	0.874573	1.025298
6	5.764735	-0.138489	0.101409
1	6.262080	-2.121927	-0.580848
1	4.959027	1.728902	0.821990
1	6.784101	0.235266	0.022505
6	0.280729	1.770633	-0.340077
6	0.609829	-0.747189	-0.280905
6	1.180712	0.066481	-1.465126
7	0.949207	1.430658	-1.406496
8	1.752619	-0.494336	-2.383312
16	-0.158141	0.497328	0.803895
6	-0.376428	-1.847685	-0.867599
6	-1.840338	-1.647860	-0.624802
6	-2.541723	-0.723673	-1.403731
6	-2.512445	-2.336726	0.385558
6	-3.890721	-0.477018	-1.177555
1	-2.025398	-0.183549	-2.198173
6	-3.865598	-2.108996	0.621548
1	-1.976501	-3.064740	0.990728
6	-4.536689	-1.176614	-0.161789
1	-4.433916	0.243682	-1.783379
1	-4.389429	-2.647984	1.406766
1	-0.178234	-1.850654	-1.953565
6	-0.091251	3.151011	-0.058046
6	0.326491	4.166040	-0.935974
6	-0.851103	3.490437	1.072234
6	-0.008690	5.488238	-0.682218
1	0.915012	3.896423	-1.809597
6	-1.184246	4.814708	1.320829
1	-1.190069	2.717091	1.760852
6	-0.763134	5.815515	0.445530
1	0.320194	6.269069	-1.364752
1	-1.774364	5.067812	2.198614
1	-1.024458	6.853524	0.642314
17	-6.239409	-0.878031	0.131267
1	1.844031	-3.835089	0.297988
1	1.903794	-2.972042	-1.273586
1	1.717845	-1.844423	3.963965
1	3.121846	-1.268495	2.900871

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6	0.491123	-2.614456	-0.417457
6	0.495771	-1.182529	0.123322
8	-0.879182	-2.941924	-0.554092
6	0.088963	-1.138470	1.584902
6	-0.326061	-2.158014	2.335991
1	0.183066	-0.151802	2.043584
6	1.837847	-0.477238	-0.007515
6	3.000843	-1.183268	-0.329504
6	1.942159	0.896575	0.245814
6	4.230241	-0.532033	-0.411612
1	2.958692	-2.254089	-0.520359
6	3.167648	1.550098	0.156831
1	1.053453	1.465630	0.522699
6	4.318583	0.836677	-0.173322
1	5.122372	-1.101903	-0.665788
1	3.222305	2.620121	0.350506
1	5.278769	1.345044	-0.241679
6	-1.265587	1.858640	-1.246158
6	-0.655175	-0.562308	-0.777752
6	-0.088646	0.134653	-2.034576
7	-0.477494	1.453262	-2.201896
8	0.622974	-0.476273	-2.812952
16	-1.652906	0.717341	0.047089
6	-1.462071	-1.853751	-1.241296
6	-2.944455	-1.833981	-1.026135

6	-3.770480	-1.227156	-1.975118
6	-3.513956	-2.371109	0.129456
6	-5.144260	-1.141939	-1.776780
1	-3.334086	-0.808954	-2.882932
6	-4.887330	-2.303353	0.341863
1	-2.877162	-2.849841	0.870590
6	-5.685240	-1.683505	-0.614493
1	-5.785526	-0.670376	-2.516958
1	-5.331809	-2.725075	1.239952
1	-1.245253	-1.955039	-2.318654
6	-1.824150	3.204251	-1.213043
6	-1.533304	4.089926	-2.265429
6	-2.645027	3.636235	-0.159345
6	-2.054615	5.375328	-2.259070
1	-0.897855	3.749463	-3.079559
6	-3.161795	4.924400	-0.157072
1	-2.883502	2.965781	0.665865
6	-2.868320	5.795563	-1.206105
1	-1.826949	6.054303	-3.078083
1	-3.795870	5.250191	0.664464
1	-3.275749	6.804841	-1.203125
17	-7.415950	-1.592695	-0.352336
1	0.948337	-3.341087	0.261405
1	0.995714	-2.660933	-1.395301
1	-0.563092	-2.007781	3.387691
1	-0.447462	-3.169374	1.951853

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6	0.989971	2.842639	-1.148092
6	-0.170538	2.317801	-0.277537
8	1.958324	1.809233	-1.106062
6	0.270456	2.447727	1.182890
6	-0.061722	3.591320	1.922585
6	1.145442	1.529283	1.775217
6	0.433992	3.787795	3.209341
1	-0.715976	4.343430	1.487635
6	1.642656	1.719760	3.061821
1	1.462821	0.643136	1.230902
6	1.285527	2.850747	3.789874
1	0.151671	4.684364	3.759078
1	2.316552	0.978301	3.488289
1	1.669653	3.002938	4.797073
6	-2.221308	-0.725542	-0.627565
6	-0.202962	0.819998	-0.815888
6	-1.200189	0.694588	-2.006606
7	-2.279596	-0.142853	-1.791061
8	-1.002109	1.289654	-3.051728
16	-0.847973	-0.351632	0.417421
6	1.258909	0.609979	-1.390964
6	2.044545	-0.590396	-0.948020
6	1.621788	-1.865015	-1.340029
6	3.211927	-0.467255	-0.193085
6	2.333915	-3.000324	-0.972597
1	0.723237	-1.974017	-1.948604
6	3.941124	-1.593229	0.182345
1	3.557704	0.520425	0.102923
6	3.489196	-2.847140	-0.210200
1	2.001050	-3.988639	-1.279176
1	4.850206	-1.493993	0.769783
1	1.117763	0.547736	-2.482920
6	-3.247526	-1.649844	-0.162888
6	-4.349790	-1.925282	-0.990863
6	-3.163993	-2.264590	1.096439
6	-5.344185	-2.792039	-0.561555
1	-4.409355	-1.447639	-1.965787
6	-4.162009	-3.130383	1.520926
1	-2.316796	-2.065309	1.751707
6	-5.253471	-3.395083	0.693888
1	-6.195216	-3.000536	-1.206424
1	-4.089448	-3.600324	2.499084
1	-6.036171	-4.073114	1.028911
17	4.403610	-4.270034	0.252964
6	-1.489029	2.988445	-0.579311
1	-1.554117	3.477748	-1.552661
6	-2.569652	2.939915	0.199288
1	-3.509224	3.391951	-0.112897
1	-2.559538	2.460272	1.178803
1	0.650734	3.020660	-2.181288
1	1.449789	3.753477	-0.753429

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6	0.635365	-2.667632	-0.164948
6	0.886641	-1.144652	-0.108173
8	-0.213679	-2.926852	-1.271565
6	0.799516	-0.645637	1.341501
6	1.851957	0.042281	1.951906
6	-0.349763	-0.892836	2.108200
6	1.758560	0.475336	3.275295

1	2.765658	0.241085	1.395998	**4a''**				
6	-0.448069	-0.460881	3.425287		6	2.133322	-2.989143	-0.731052
1	-1.192617	-1.427861	1.668889		6	2.095999	-1.789940	0.246978
6	0.609732	0.227810	4.018196		8	0.869069	-3.056158	-1.389690
1	2.596046	1.007672	3.723407		6	1.488142	-2.257821	1.555438
1	-1.355233	-0.667532	3.990916		6	1.910539	-1.945047	2.779770
1	0.537107	0.565041	5.050711		1	0.625722	-2.921137	1.446865
6	-0.665428	1.820170	-1.743328		6	3.473888	-1.192083	0.456003
6	-0.313162	-0.606008	-1.038662		6	4.560627	-2.059678	0.625564
6	0.207577	-0.115298	-2.429826		6	3.702609	0.182158	0.556005
7	0.015579	1.234959	-2.684415		6	5.838831	-1.567593	0.869932
8	0.709401	-0.882989	-3.226382		1	4.401494	-3.136849	0.573430
16	-1.168967	0.846375	-0.357499		6	4.981798	0.679077	0.801706
6	-1.170770	-1.889314	-1.341255		1	2.879233	0.886089	0.443272
6	-2.401544	-2.170588	-0.500664		6	6.054539	-0.193276	0.959460
6	-3.527621	-1.342367	-0.571254		1	6.668116	-2.262298	0.992816
6	-2.472396	-3.322990	0.286634		1	5.134626	1.754708	0.870517
6	-4.674757	-1.622240	0.164356		1	7.053501	0.194237	1.151511
1	-3.522949	-0.470025	-1.222032		6	0.435862	1.545860	-0.783528
6	-3.610072	-3.621348	1.030883		6	1.064775	-0.882359	-0.494574
1	-1.631903	-4.012013	0.306970		6	1.657572	-0.098570	-1.680268
6	-4.695966	-2.756553	0.970271		7	1.178339	1.201500	-1.796293
1	-5.544172	-0.972716	0.103684		8	2.426722	-0.614716	-2.470596
1	-3.650200	-4.517851	1.644191		16	0.198234	0.355392	0.511405
1	-1.487338	-1.846920	-2.391564		6	0.059149	-1.955135	-1.039006
6	-1.022792	3.232505	-1.802213		6	-0.182206	2.860487	-0.674600
6	-0.714422	3.962660	-2.962896		6	0.021036	3.798937	-1.701186
6	-1.664403	3.878940	-0.734503		6	-0.973660	3.211281	0.430071
6	-1.044292	5.307388	-3.049544		6	-0.558977	5.056535	-1.619914
1	-0.219038	3.455027	-3.786791		1	0.635276	3.520849	-2.554137
6	-1.990425	5.225505	-0.825986		6	-1.548937	4.472137	0.507708
1	-1.903992	3.333673	0.177842		1	-1.145645	2.497045	1.234540
6	-1.682478	5.941358	-1.982576		6	-1.343101	5.396334	-0.516242
1	-0.804193	5.865697	-3.952044		1	-0.399523	5.778001	-2.418346
1	-2.485047	5.719059	0.007498		1	-2.159374	4.735141	1.368474
1	-1.940486	6.996440	-2.052348		1	-1.795550	6.384258	-0.454519
17	-6.134381	-3.117611	1.904516		1	2.304249	-3.936158	-0.202481
6	2.208867	-0.721301	-0.712495		1	2.916728	-2.854735	-1.486968
1	2.287265	0.354254	-0.900034		1	1.401450	-2.332086	3.660479
6	3.267200	-1.480213	-0.983012		1	2.770190	-1.298973	2.956064
1	4.172211	-1.038631	-1.395913		6	-0.783275	-1.507948	-2.201287
1	3.296045	-2.555850	-0.816404		6	-0.379651	-1.733688	-3.519508
1	1.542648	-3.257109	-0.317603		6	-1.973943	-0.816100	-1.962903
1	0.171045	-3.008169	0.772399		6	-1.147269	-1.276272	-4.585742

1	0.541510	-2.279339	-3.708839
6	-2.745993	-0.336894	-3.016077
1	-2.311223	-0.655707	-0.939181
6	-2.319380	-0.575772	-4.318396
1	-0.838408	-1.461482	-5.611436
1	-3.670556	0.202470	-2.827476
17	-3.294647	0.002676	-5.654462
1	-0.610409	-2.220814	-0.203038

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6	2.241188	-2.483840	0.231415
6	2.367410	-1.001301	0.621671
8	0.928482	-2.918035	0.589481
6	2.754594	-0.822220	2.078686
6	2.746090	-1.766480	3.019620
1	3.047985	0.196925	2.343050
6	3.395583	-0.284194	-0.237378
6	4.646124	-0.893358	-0.406980
6	3.186347	0.971595	-0.812459
6	5.649618	-0.275287	-1.146036
1	4.836217	-1.864021	0.051920
6	4.191196	1.594647	-1.551034
1	2.232443	1.484281	-0.694218
6	5.425233	0.973724	-1.722784
1	6.610958	-0.771215	-1.269976
1	4.003081	2.571210	-1.993880
1	6.208952	1.461189	-2.299796
6	-0.526068	1.465887	-0.090408
6	0.882417	-0.561454	0.449070
6	0.448120	-0.326836	-1.009555
7	-0.400872	0.761219	-1.177660
8	0.780882	-1.075897	-1.910083
16	0.363588	0.931800	1.347626
6	0.145296	-1.823433	1.017880
6	-1.363119	2.655962	-0.020339
6	-2.130592	3.013538	-1.142377
6	-1.421554	3.450779	1.134895
6	-2.940467	4.139090	-1.102446
1	-2.080764	2.392004	-2.033050
6	-2.229101	4.579690	1.166945
1	-0.832432	3.193140	2.014537
6	-2.989740	4.925054	0.049841
1	-3.535691	4.407465	-1.972478
1	-2.265092	5.192205	2.064911
1	-3.623459	5.809353	0.077666
1	2.977360	-3.108241	0.752023
1	2.369795	-2.608692	-0.849925
1	3.030900	-1.537139	4.044459
1	2.455901	-2.797389	2.815872
6	-1.284422	-1.971672	0.579440
6	-1.610423	-2.662362	-0.591085
6	-2.303775	-1.362873	1.316068
6	-2.928305	-2.738739	-1.027416
1	-0.821053	-3.141221	-1.165254
6	-3.626877	-1.416827	0.887974
1	-2.063619	-0.840385	2.241912
6	-3.920352	-2.106788	-0.283709
1	-3.181748	-3.281293	-1.934742
1	-4.417106	-0.939624	1.461661
17	-5.583530	-2.197757	-0.830554
1	0.183070	-1.738890	2.118005

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6	0.669736	2.945261	-1.920878
6	-0.255809	2.527017	-0.763125
8	1.633140	1.905080	-2.030578
6	0.469977	2.829644	0.550851
6	0.339791	4.108581	1.114595
6	1.377429	1.951343	1.152825
6	1.062346	4.479695	2.243889
1	-0.338105	4.827942	0.659977
6	2.099698	2.316494	2.288185
1	1.549374	0.957745	0.746660
6	1.944478	3.582236	2.842480
1	0.933820	5.479183	2.656275
1	2.791990	1.602679	2.730868
1	2.509365	3.869504	3.727386
6	-2.298959	-0.595673	-0.601706
6	-0.374141	0.992592	-1.124012
6	-1.506969	0.780498	-2.171479
7	-2.501468	-0.102091	-1.788711
8	-1.488602	1.345619	-3.250363
16	-0.860762	-0.061147	0.278169
6	1.028511	0.652169	-1.743727
6	-3.211188	-1.557984	0.001685
6	-4.360862	-1.933327	-0.715222
6	-2.972516	-2.123753	1.263826
6	-5.248691	-2.853402	-0.178287

1	-4.537129	-1.491060	-1.692658
6	-3.864580	-3.045738	1.795816
1	-2.085564	-1.849828	1.834586
6	-5.002634	-3.411690	1.076742
1	-6.136219	-3.138314	-0.739189
1	-3.672027	-3.481611	2.773610
1	-5.699372	-4.134917	1.496136
6	-1.627576	3.157064	-0.847314
1	-1.919315	3.513830	-1.835967
6	-2.505893	3.212584	0.153618
1	-3.502913	3.623046	0.005205
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1	0.099110	3.055241	-2.854046
1	1.210484	3.875165	-1.716429
6	1.000485	-0.264829	-2.944527
6	1.252324	0.209348	-4.231465
6	0.717538	-1.621684	-2.763680
6	1.217092	-0.647697	-5.326831
1	1.481341	1.262378	-4.377401
6	0.670483	-2.493625	-3.846699
1	0.537582	-2.013586	-1.761768
6	0.922638	-1.991460	-5.119360
1	1.414188	-0.276124	-6.329477
1	0.450270	-3.548261	-3.702651
17	0.881039	-3.080807	-6.492238
1	1.642817	0.160486	-0.976262

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6	-1.258832	-2.588307	1.044407
6	-1.797907	-1.155071	0.922872
8	-0.580192	-2.840720	-0.180383
6	-3.045583	-1.149024	0.027635
6	-4.315614	-1.008135	0.602605
6	-2.982594	-1.349311	-1.359003
6	-5.471979	-1.048944	-0.173488
1	-4.405863	-0.865949	1.677282
6	-4.136765	-1.387375	-2.137493
1	-2.030061	-1.483657	-1.863488
6	-5.389711	-1.234877	-1.550152
1	-6.441748	-0.931338	0.307475
1	-4.049053	-1.539617	-3.211926
1	-6.291472	-1.262096	-2.159042
6	0.191174	1.952058	0.256289
6	-0.533179	-0.488543	0.246915
6	0.467145	0.009183	1.326039
7	0.798313	1.352927	1.239579
8	0.926071	-0.746304	2.162229
16	-0.913495	0.992653	-0.741150
6	0.091785	-1.662289	-0.596689
6	0.395909	3.363163	-0.042863
6	1.336673	4.086326	0.711183
6	-0.312618	4.014116	-1.064487
6	1.562246	5.428171	0.442768
1	1.882058	3.574833	1.500496
6	-0.085355	5.358445	-1.326172
1	-1.049228	3.472066	-1.657131
6	0.853026	6.066751	-0.575418
1	2.294876	5.980593	1.027446
1	-0.639658	5.855977	-2.118706
1	1.032323	7.119555	-0.785427
6	-2.101995	-0.484691	2.236004
1	-2.328695	0.583473	2.157038
6	-2.144825	-1.072038	3.429563
1	-2.384530	-0.502589	4.325568
1	-1.947251	-2.134213	3.571481
1	-0.567361	-2.671331	1.894629
1	-2.049511	-3.338740	1.144312
6	1.595059	-1.787999	-0.512089
6	2.202623	-2.843866	0.165627
6	2.397391	-0.823878	-1.128675
6	3.589085	-2.939485	0.239513
1	1.582635	-3.601024	0.640222
6	3.784643	-0.897386	-1.060160
1	1.937963	-0.001910	-1.679646
6	4.363499	-1.959940	-0.372874
1	4.061952	-3.763678	0.767508
1	4.406094	-0.146420	-1.541272
17	6.111438	-2.070486	-0.290241
1	-0.156701	-1.500052	-1.655097

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46	-0.003909	-0.005643	0.019476
15	-1.394364	1.801431	0.770909
15	-0.856109	-2.114827	0.783643
15	2.255587	0.295860	0.785087
15	-0.009894	0.008771	-2.365990
6	1.562474	-0.444175	-3.213592
6	2.065816	0.229508	-4.333047

6	2.299870	-1.505716	-2.677190	6	-1.787499	4.543999	0.038925
6	3.290407	-0.141902	-4.886843	6	0.912894	5.170159	0.308446
1	1.508149	1.052320	-4.771127	1	1.182843	3.101595	0.803817
6	3.512546	-1.889623	-3.240818	6	-1.343057	5.842916	-0.202556
1	1.925696	-2.021537	-1.799074	1	-2.844950	4.319035	-0.056827
6	4.016755	-1.200097	-4.342979	6	0.006980	6.161067	-0.068749
1	3.675732	0.397652	-5.748361	1	1.969644	5.401366	0.413013
1	4.071061	-2.713652	-2.804744	1	-2.057720	6.608649	-0.493424
1	4.972673	-1.484796	-4.774791	1	0.351096	7.174483	-0.258306
6	-0.397600	1.599705	-3.212369	6	-1.693913	1.931841	2.589140
6	-1.250016	1.698868	-4.318150	6	-1.947203	0.751769	3.297658
6	0.188174	2.765749	-2.705636	6	-1.679135	3.144003	3.288004
6	-1.521816	2.940609	-4.890787	6	-2.185910	0.776952	4.668427
1	-1.709056	0.805998	-4.732448	1	-1.948938	-0.196854	2.771936
6	-0.066888	4.003069	-3.289095	6	-1.900983	3.169508	4.664626
1	0.840627	2.704615	-1.840575	1	-1.493533	4.075037	2.761201
6	-0.932734	4.095093	-4.378340	6	-2.156273	1.988305	5.358645
1	-2.194679	3.003453	-5.742331	1	-2.380296	-0.152590	5.197000
1	0.396650	4.896149	-2.878505	1	-1.878490	4.119058	5.193509
1	-1.147479	5.062072	-4.825666	1	-2.329027	2.011038	6.431406
6	-1.195819	-1.123479	-3.207517	6	-0.059331	-3.650737	0.138513
6	-0.862494	-1.898779	-4.324308	6	0.068556	-3.774031	-1.250443
6	-2.487560	-1.224116	-2.677440	6	0.406132	-4.690908	0.949830
6	-1.797565	-2.768301	-4.884074	6	0.649367	-4.902843	-1.818451
1	0.132138	-1.831920	-4.755557	1	-0.296082	-2.978630	-1.892548
6	-3.427652	-2.076966	-3.247857	6	1.000136	-5.818467	0.381755
1	-2.754097	-0.640229	-1.802094	1	0.309196	-4.626893	2.029395
6	-3.081068	-2.859975	-4.348529	6	1.124670	-5.928784	-1.001679
1	-1.521285	-3.372920	-5.744271	1	0.735145	-4.975490	-2.899902
1	-4.423760	-2.142288	-2.818154	1	1.361320	-6.615321	1.027096
1	-3.807315	-3.540363	-4.785462	1	1.587019	-6.808835	-1.440828
6	-3.129111	1.867968	0.145209	6	-2.621804	-2.537224	0.442549
6	-3.314978	1.839931	-1.242246	6	-3.579556	-1.527655	0.580659
6	-4.254793	1.948507	0.971595	6	-3.049751	-3.821722	0.087980
6	-4.590584	1.887106	-1.794575	6	-4.930583	-1.786610	0.369277
1	-2.449516	1.789274	-1.895239	1	-3.264154	-0.524603	0.844870
6	-5.535708	1.983049	0.418996	6	-4.400852	-4.081669	-0.135792
1	-4.138528	1.980585	2.050700	1	-2.329862	-4.627779	-0.013544
6	-5.708782	1.951795	-0.963206	6	-5.345547	-3.066805	0.003649
1	-4.708375	1.866507	-2.875181	1	-5.654463	-0.983433	0.478939
1	-6.400265	2.039402	1.075623	1	-4.714118	-5.083700	-0.417845
1	-6.707716	1.979379	-1.390165	1	-6.398243	-3.271741	-0.172800
6	-0.884477	3.539221	0.404809	6	-0.791300	-2.446531	2.600083
6	0.467830	3.871182	0.535717	6	-1.873586	-2.947736	3.332030

6	0.402254	-2.166821	3.276848
6	-1.765484	-3.150303	4.707913
1	-2.809136	-3.180115	2.833022
6	0.517111	-2.384414	4.646231
1	1.250411	-1.771117	2.728957
6	-0.571769	-2.870573	5.369480
1	-2.619447	-3.532931	5.261278
1	1.454857	-2.160242	5.147824
1	-0.490223	-3.029377	6.441521
6	3.184356	1.764347	0.159004
6	3.272609	1.928086	-1.229122
6	3.806592	2.704972	0.986475
6	3.958828	3.005201	-1.779968
1	2.806642	1.198845	-1.884186
6	4.485531	3.792117	0.434775
1	3.762944	2.596346	2.065897
6	4.563690	3.947091	-0.947627
1	4.014847	3.109037	-2.860806
1	4.959112	4.516844	1.092343
1	5.093505	4.794750	-1.374061
6	2.497328	0.499370	2.605129
6	3.486077	-0.172509	3.332739
6	1.634708	1.364780	3.288796
6	3.599234	0.011249	4.710708
1	4.171903	-0.847006	2.829269
6	1.757723	1.563104	4.660646
1	0.854851	1.884813	2.743754
6	2.738050	0.879079	5.378957
1	4.368208	-0.525250	5.260923
1	1.077154	2.241964	5.167773
1	2.828412	1.020454	6.452730
6	3.514756	-1.010558	0.434290
6	3.120160	-2.349328	0.516618
6	4.850542	-0.724389	0.129131
6	4.029822	-3.380694	0.300849
1	2.085919	-2.587279	0.737742
6	5.761597	-1.754385	-0.099140
1	5.188098	0.305803	0.072018
6	5.355582	-3.084954	-0.013957
1	3.696481	-4.413087	0.366258
1	6.793559	-1.513273	-0.341334
1	6.067577	-3.886359	-0.193128

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15	0.030345	-0.013332	-1.227263
6	1.649691	-0.319634	-0.417466
6	2.774028	0.305761	-0.977995
6	1.829265	-1.150573	0.695334
6	4.040030	0.119938	-0.430443
1	2.653372	0.947141	-1.852162
6	3.099221	-1.345891	1.235704
1	0.972072	-1.649441	1.146892
6	4.206257	-0.711407	0.676545
1	4.900285	0.616526	-0.876667
1	3.222111	-1.997408	2.099645
1	5.197089	-0.866243	1.100190
6	-0.524699	1.552796	-0.443026
6	-1.684356	2.140138	-0.971066
6	0.120138	2.183331	0.627810
6	-2.198599	3.313990	-0.430059
1	-2.192428	1.665410	-1.811647
6	-0.388934	3.366942	1.161643
1	1.022619	1.745256	1.054111
6	-1.549667	3.932312	0.638234
1	-3.104165	3.751379	-0.847818
1	0.122609	3.845245	1.995668
1	-1.946114	4.855029	1.058658
6	-1.065794	-1.240943	-0.410191
6	-1.230900	-2.483023	-1.039346
6	-1.742146	-1.002052	0.793680
6	-2.043436	-3.464119	-0.476692
1	-0.718194	-2.680722	-1.981632
6	-2.561473	-1.980447	1.351950
1	-1.626425	-0.044043	1.300743
6	-2.713553	-3.213132	0.719363
1	-2.161060	-4.423149	-0.978850
1	-3.082379	-1.779030	2.287052
1	-3.357798	-3.974932	1.155265

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46	0.320643	-0.716204	-0.176622
15	-1.623038	2.638995	0.667213
15	2.515409	-0.067950	0.489161
15	0.156462	-0.100151	-2.450161
6	1.600650	-0.823423	-3.319922
6	2.208073	-0.239361	-4.436209
6	2.136139	-2.011630	-2.800032
6	3.338697	-0.820709	-5.008186

1	1.807292	0.684030	-4.854663	1	0.996646	3.621972	1.145207
6	3.263272	-2.593941	-3.372818	6	-0.971537	6.639527	-0.275747
1	1.669091	-2.465035	-1.921630	1	-2.646907	5.298288	-0.420726
6	3.872069	-1.993118	-4.475405	6	0.360652	6.797523	0.106501
1	3.809308	-0.349495	-5.869935	1	2.101616	5.831350	0.939197
1	3.672632	-3.511308	-2.951070	1	-1.526955	7.484773	-0.679572
1	4.760869	-2.439095	-4.918855	1	0.848171	7.764804	-0.002994
6	0.087876	1.626119	-3.063335	6	-2.502585	2.962729	2.255101
6	-0.489951	1.970217	-4.294337	6	-1.944300	2.450935	3.432065
6	0.631745	2.640195	-2.264801	6	-3.662746	3.744964	2.345768
6	-0.514141	3.296764	-4.716868	6	-2.527528	2.706802	4.672174
1	-0.924182	1.194921	-4.926096	1	-1.047237	1.833227	3.375630
6	0.619976	3.966477	-2.695101	6	-4.250350	3.996338	3.582095
1	1.061433	2.387594	-1.292068	1	-4.110722	4.156266	1.440720
6	0.042600	4.297155	-3.919366	6	-3.684679	3.477711	4.748006
1	-0.970058	3.550091	-5.672991	1	-5.152933	4.602952	3.636796
1	1.039296	4.744769	-2.057438	1	-4.148127	3.674797	5.713217
1	0.019287	5.334672	-4.248727	6	3.457321	1.206613	-0.455962
6	-1.262479	-0.873273	-3.322006	6	4.011875	0.886368	-1.705116
6	-1.118034	-1.813537	-4.348307	6	3.558715	2.530225	-0.004469
6	-2.555043	-0.536157	-2.892888	6	4.650866	1.857256	-2.472328
6	-2.239955	-2.401370	-4.933376	1	3.959548	-0.137852	-2.074582
1	-0.124943	-2.089455	-4.700822	6	4.190735	3.502399	-0.777576
6	-3.673025	-1.113454	-3.485549	1	3.148601	2.811423	0.965335
1	-2.682063	0.185026	-2.082086	6	4.738887	3.171107	-2.014254
6	-3.518253	-2.052401	-4.506513	1	5.085766	1.582308	-3.432604
1	-2.109660	-3.132400	-5.729894	1	4.260557	4.523288	-0.404626
1	-4.669123	-0.836156	-3.142497	1	5.237678	3.929667	-2.615067
1	-4.392974	-2.511745	-4.963907	6	2.697642	0.608724	2.188857
6	-3.006187	2.516930	-0.523085	6	3.864540	0.475320	2.950548
6	-2.908123	3.034238	-1.823256	6	1.653190	1.397539	2.686269
6	-4.131084	1.740189	-0.197429	6	3.987087	1.130717	4.173985
6	-3.919364	2.814453	-2.756133	1	4.689671	-0.135433	2.584203
1	-2.035907	3.622319	-2.107973	6	1.785330	2.075528	3.896737
6	-5.138307	1.517903	-1.132571	1	0.730526	1.484109	2.103298
1	-4.227174	1.317028	0.803397	6	2.955417	1.944394	4.641856
6	-5.039723	2.060290	-2.413917	1	4.898602	1.014862	4.758468
1	-3.827183	3.237135	-3.756049	1	0.968922	2.700622	4.259681
1	-6.005699	0.920096	-0.856644	1	3.060030	2.465701	5.592024
1	-5.829426	1.889304	-3.143641	6	3.666568	-1.500431	0.458770
6	-0.899271	4.304372	0.374972	6	3.117032	-2.781039	0.601097
6	0.438488	4.475315	0.755060	6	5.056217	-1.379107	0.314996
6	-1.601701	5.405740	-0.131643	6	3.929490	-3.912215	0.615590
6	1.063192	5.714544	0.631713	1	2.035167	-2.881031	0.694003

6	5.868658	-2.510698	0.314144
1	5.507641	-0.394329	0.199005
6	5.308728	-3.778858	0.466317
1	3.481407	-4.897919	0.733945
1	6.945553	-2.399803	0.198450
1	5.947069	-4.660646	0.465497
1	-2.079181	2.295139	5.576033
6	-2.006746	-0.798989	2.611795
6	-1.044254	-1.974907	2.480592
1	-2.034669	-0.361572	3.613904
1	-1.817487	-0.012048	1.871222
8	-3.300164	-1.367826	2.359922
6	-0.617815	-2.237701	1.064293
6	-1.412654	-1.900190	-0.061332
1	-0.018551	-3.146709	0.974996
6	0.088560	-2.048978	3.479078
6	0.957938	-3.149493	3.438506
6	0.303533	-1.074159	4.457570
6	2.011547	-3.264669	4.338528
1	0.804487	-3.934951	2.699636
6	1.356278	-1.190737	5.364500
1	-0.331391	-0.191637	4.515517
6	2.215303	-2.283335	5.308619
1	2.673081	-4.128034	4.284003
1	1.506551	-0.411548	6.110006
1	3.038956	-2.371594	6.015278
6	-3.244743	-2.699353	2.593481
8	-1.993559	-3.096110	2.849740
8	-4.212124	-3.419179	2.574076
1	-2.313898	-1.290138	0.044634
1	-1.438076	-2.573395	-0.921100

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6	-1.305000	1.243109	0.646659
6	-0.544282	2.095391	-0.383453
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1	-1.574096	1.806035	1.549023
8	-2.515241	0.858209	-0.017982
6	-0.778799	3.576792	-0.249561
6	-2.051992	4.091545	0.108359
1	-0.144567	4.171401	-0.913057
6	0.917655	1.752760	-0.521198
6	1.559586	1.845728	-1.760165
6	1.663419	1.391963	0.601947
6	2.917837	1.558191	-1.871216
1	0.988219	2.127261	-2.642677
6	3.022347	1.107072	0.493298
1	1.179110	1.345499	1.577068
6	3.653144	1.185386	-0.746328
1	3.404023	1.625587	-2.843260
1	3.587100	0.830970	1.382972
1	4.715584	0.963141	-0.834920
6	-2.381757	1.057928	-1.348036
8	-1.216343	1.645026	-1.639993
8	-3.216300	0.738044	-2.156903
1	-2.882475	3.421653	0.349325
1	-2.369282	5.057377	-0.290656
46	-0.789886	4.374075	1.770460
15	-2.340415	5.360381	3.245961
6	-2.367388	7.187518	3.171475
6	-3.434793	7.955392	3.660892
6	-1.279783	7.838053	2.576405
6	-3.401394	9.343671	3.571198
1	-4.296030	7.461185	4.111716
6	-1.246643	9.228805	2.487193
1	-0.459257	7.238678	2.175510
6	-2.306430	9.981868	2.986594
1	-4.233807	9.930894	3.955548
1	-0.394992	9.721781	2.020660
1	-2.284766	11.068005	2.915762
6	-4.068496	4.911298	2.813934
6	-4.732795	3.847188	3.435845
6	-4.689463	5.547593	1.727612
6	-5.985116	3.431454	2.986731
1	-4.274774	3.336139	4.282047
6	-5.942458	5.134721	1.284616
1	-4.184568	6.371225	1.221216
6	-6.594613	4.072331	1.910912
1	-6.486980	2.604543	3.486720
1	-6.411047	5.644712	0.444279
1	-7.572943	3.747328	1.561347
6	-2.231971	4.948058	5.029945
6	-2.362042	5.885002	6.061641
6	-1.914947	3.621880	5.361898
6	-2.176305	5.504495	7.389391
1	-2.583405	6.925947	5.831681
6	-1.740237	3.239100	6.689002
1	-1.795060	2.884262	4.565668

6	-1.864865	4.183951	7.707306	8	-2.318131	0.870356	-0.876159
1	-2.271468	6.248715	8.178683	6	-1.078843	3.684185	-0.224394
1	-1.495754	2.204770	6.926440	6	-2.436098	4.012693	-0.142218
1	-1.715847	3.891831	8.745435	1	-0.384094	4.404495	-0.665700
15	1.270472	4.428924	2.902496	6	0.849878	2.167885	0.276376
6	1.545799	6.007426	3.809343	6	1.955454	2.516868	-0.503165
6	2.236671	7.074582	3.220018	6	1.046465	1.784816	1.605835
6	0.937024	6.211483	5.056850	6	3.238270	2.468190	0.039134
6	2.318713	8.308882	3.861266	1	1.812646	2.814403	-1.540825
1	2.716662	6.946384	2.250102	6	2.327140	1.745452	2.150917
6	1.021569	7.444798	5.697615	1	0.187893	1.520107	2.222362
1	0.400284	5.393477	5.536363	6	3.427864	2.085551	1.366521
6	1.710552	8.499973	5.100463	1	4.094049	2.734510	-0.578925
1	2.862132	9.124769	3.387098	1	2.461525	1.452296	3.191835
1	0.546915	7.578912	6.669072	1	4.430828	2.055433	1.789486
1	1.776541	9.464544	5.600855	6	-1.643697	1.209099	-1.995603
6	1.530544	3.161339	4.201867	8	-0.522293	1.889135	-1.700387
6	0.798746	1.968364	4.128164	8	-2.003959	0.932443	-3.110063
6	2.418415	3.338863	5.272137	1	-3.206768	3.244490	-0.053060
6	0.967389	0.966268	5.081475	1	-2.780677	4.972734	-0.528834
1	0.072275	1.839160	3.322535	46	-1.526270	4.347863	1.754393
6	2.580451	2.342815	6.231774	15	-0.289447	4.873448	3.634356
1	2.980565	4.268426	5.359313	6	-0.817235	6.504323	4.291448
6	1.861007	1.152262	6.134318	6	0.059921	7.454901	4.826756
1	0.388129	0.047040	5.009682	6	-2.188059	6.797129	4.241596
1	3.273938	2.496299	7.056888	6	-0.426836	8.668848	5.309280
1	1.988776	0.374865	6.885587	1	1.129071	7.246486	4.870066
6	2.800887	4.360537	1.880144	6	-2.673976	8.005977	4.731452
6	2.719185	4.827332	0.561492	1	-2.875545	6.066219	3.808418
6	4.042080	3.940044	2.371125	6	-1.791719	8.945765	5.264679
6	3.853795	4.883737	-0.245179	1	0.265602	9.400381	5.722391
1	1.752205	5.151570	0.169673	1	-3.740653	8.219570	4.687897
6	5.173954	3.980874	1.559538	1	-2.168246	9.895362	5.640609
1	4.130129	3.567796	3.391139	6	-0.363663	3.803258	5.123867
6	5.084203	4.457182	0.252782	6	-0.690054	2.450722	4.959259
1	3.773493	5.250276	-1.267537	6	-0.118172	4.285937	6.416800
1	6.130475	3.638432	1.951376	6	-0.743884	1.593662	6.056101
1	5.969942	4.487460	-0.379390	1	-0.917939	2.074478	3.960296
				6	-0.178098	3.430986	7.514049
L1-Pd-1a				1	0.122559	5.339009	6.565542
6	-1.524005	1.217572	0.268291	6	-0.486414	2.082792	7.335227
6	-0.550390	2.267575	-0.269877	1	-0.998720	0.544981	5.911844
1	-1.012166	0.314048	0.618914	1	0.014848	3.819527	8.512643
1	-2.186485	1.595811	1.053015	1	-0.533926	1.416039	8.194352

6	1.504135	5.107404	3.329346
6	1.881238	5.569645	2.060143
6	2.498874	4.859847	4.282820
6	3.219830	5.801174	1.757835
1	1.109430	5.739362	1.305787
6	3.840343	5.080871	3.974619
1	2.229421	4.491541	5.272335
6	4.203213	5.555591	2.715993
1	3.497389	6.155481	0.766095
1	4.604397	4.883519	4.724765
1	5.251898	5.725218	2.477611

TS1

6	-2.054312	2.489056	1.268645
6	-2.129111	1.995030	-0.179894
1	-2.841701	1.996915	1.865970
1	-1.094237	2.196428	1.721927
8	-2.133605	3.879278	1.379216
6	-1.152178	2.431004	-1.089521
6	0.115612	2.890784	-0.667579
1	-1.291856	2.222345	-2.151355
6	-3.385846	1.402543	-0.677378
6	-3.821502	1.623906	-1.998096
6	-4.195902	0.603779	0.148179
6	-4.988373	1.046004	-2.479701
1	-3.256067	2.289499	-2.647147
6	-5.360716	0.015688	-0.338437
1	-3.902472	0.415508	1.179174
6	-5.760739	0.226052	-1.655544
1	-5.302902	1.245247	-3.503130
1	-5.960458	-0.609180	0.322023
1	-6.675538	-0.227595	-2.033048
6	-3.484181	4.400997	0.959797
8	-3.617999	4.492795	-0.266435
8	-4.205609	4.670487	1.921968
1	0.227255	3.397107	0.291833
1	0.848445	3.165890	-1.425139
46	0.006296	0.810046	-0.166226
15	-0.701982	-1.435159	0.250670
6	-1.975085	-1.459741	1.558885
6	-3.082269	-2.315533	1.558745
6	-1.806511	-0.559861	2.619131
6	-4.009536	-2.256481	2.597086
1	-3.234055	-3.016808	0.738467
6	-2.730215	-0.505948	3.658687
1	-0.949398	0.117302	2.619185
6	-3.839145	-1.350805	3.643651
1	-4.875879	-2.915747	2.582579
1	-2.592397	0.207532	4.469251
1	-4.572946	-1.301656	4.446186
6	-1.456494	-2.169358	-1.242023
6	-1.670123	-3.549618	-1.369557
6	-1.818527	-1.324080	-2.299183
6	-2.235451	-4.068549	-2.530692
1	-1.385941	-4.221226	-0.559747
6	-2.389937	-1.844948	-3.457732
1	-1.639287	-0.250417	-2.213609
6	-2.595183	-3.218059	-3.575956
1	-2.393509	-5.141771	-2.620291
1	-2.665550	-1.176448	-4.272032
1	-3.031896	-3.627794	-4.485005
6	0.465313	-2.731663	0.818744
6	0.525598	-3.116644	2.164711
6	1.373541	-3.300026	-0.086172
6	1.479656	-4.033783	2.597802
1	-0.168869	-2.691526	2.888047
6	2.329904	-4.212721	0.351050
1	1.328174	-3.035053	-1.142067
6	2.391001	-4.577131	1.695188
1	1.510985	-4.319383	3.647907
1	3.027173	-4.644292	-0.365484
1	3.139703	-5.290198	2.035538
15	2.306880	0.527448	-0.269526
6	3.111247	-0.032152	1.270036
6	4.508441	-0.084668	1.398694
6	2.315638	-0.341425	2.378246
6	5.087346	-0.485536	2.598137
1	5.144318	0.206187	0.562985
6	2.897248	-0.733605	3.582140
1	1.230159	-0.266458	2.293658
6	4.282904	-0.816182	3.689540
1	6.171321	-0.529301	2.685089
1	2.264035	-0.976896	4.434015
1	4.739500	-1.125380	4.628070
6	2.685078	-0.672008	-1.593393
6	1.765824	-0.775876	-2.647185
6	3.813023	-1.499652	-1.588911
6	1.960881	-1.702911	-3.667752

1	0.880163	-0.136640	-2.646969
6	4.006951	-2.425472	-2.610952
1	4.532006	-1.446316	-0.772863
6	3.080182	-2.534394	-3.646723
1	1.232111	-1.782165	-4.473137
1	4.881585	-3.073245	-2.590239
1	3.228978	-3.268549	-4.436354
6	3.292638	2.005894	-0.698318
6	3.432066	3.015206	0.266433
6	3.852231	2.190218	-1.966614
6	4.130657	4.179856	-0.030782
6	4.549836	3.361264	-2.261060
1	3.751507	1.417540	-2.727826
6	4.692817	4.355063	-1.296331
1	4.237385	4.953255	0.727776
1	4.987534	3.491506	-3.249169
1	5.240841	5.266465	-1.528094
1	2.989247	2.885787	1.255230

IM2

46	-0.014917	-0.929659	0.294898
15	-1.153702	0.951688	-0.560779
6	-0.636231	1.432254	-2.245920
6	-1.307884	2.436293	-2.962618
6	0.393143	0.722468	-2.872490
6	-0.919855	2.754333	-4.259146
1	-2.156202	2.953458	-2.514894
6	0.770132	1.033540	-4.178616
1	0.873170	-0.106284	-2.350181
6	0.124399	2.056673	-4.867803
1	-1.444284	3.538425	-4.802330
1	1.568529	0.466750	-4.656114
1	0.420150	2.300410	-5.886820
6	-2.965060	0.808575	-0.787576
6	-3.888797	1.488069	0.012767
6	-3.433159	-0.043686	-1.800532
6	-5.257365	1.331175	-0.206871
1	-3.544184	2.149041	0.807775
6	-4.798977	-0.194103	-2.016944
1	-2.721218	-0.595574	-2.415411
6	-5.715129	0.495915	-1.222485
1	-5.966444	1.866311	0.423243
1	-5.148560	-0.855237	-2.808524
1	-6.783967	0.376278	-1.391455
6	-0.941721	2.391607	0.548791
6	-0.965136	3.728570	0.134232
6	-0.704829	2.107506	1.901142
6	-0.753136	4.753263	1.054183
1	-1.123416	3.978552	-0.913182
6	-0.497646	3.131687	2.821241
1	-0.657963	1.066082	2.224587
6	-0.518884	4.458971	2.396910
1	-0.762598	5.788108	0.716332
1	-0.305478	2.889485	3.865457
1	-0.347923	5.263437	3.110022
15	2.161615	-0.126387	0.468750
6	2.732287	1.306264	-0.514958
6	3.495363	1.138746	-1.676914
6	2.322239	2.598243	-0.153436
6	3.834346	2.237950	-2.462485
1	3.822716	0.144963	-1.979855
6	2.656450	3.693362	-0.945165
1	1.749130	2.750457	0.760754
6	3.408687	3.515388	-2.105489
1	4.428589	2.089852	-3.362711
1	2.329566	4.689323	-0.649275
1	3.669657	4.372191	-2.723973
6	2.537814	0.355470	2.189865
6	1.718304	-0.104128	3.228751
6	3.639015	1.166769	2.499266
6	1.991120	0.240945	4.550377
1	0.848590	-0.719196	2.990099
6	3.908962	1.511825	3.820647
1	4.286149	1.531095	1.701676
6	3.084823	1.052200	4.847114
1	1.341513	-0.116594	5.347445
1	4.766397	2.142168	4.049112
1	3.294782	1.328812	5.878704
6	3.347308	-1.449726	0.040194
6	3.047702	-2.219155	-1.092891
6	4.488471	-1.746858	0.792034
6	3.881107	-3.266346	-1.471398
1	2.146695	-2.013667	-1.678215
6	5.313712	-2.806521	0.415487
1	4.731243	-1.162009	1.678809
6	5.013123	-3.566243	-0.713489
1	3.633864	-3.857317	-2.352313
1	6.194172	-3.039835	1.011866

1	5.657177	-4.396487	-0.998377
6	-1.976417	-3.019645	-0.669325
6	-1.853467	-2.396580	0.710229
1	-1.748708	-4.093570	-0.633867
1	-2.999139	-2.891728	-1.044286
8	-1.107230	-2.413011	-1.617544
6	-0.710946	-2.615557	1.513965
6	0.569597	-2.890392	0.995841
1	-0.781624	-2.348866	2.570296
6	-3.066983	-1.894067	1.393883
6	-2.957165	-0.986169	2.465718
6	-4.357934	-2.320583	1.039581
6	-4.074255	-0.538942	3.157975
1	-1.972830	-0.602653	2.737387
6	-5.479403	-1.876988	1.738366
1	-4.495949	-3.036711	0.232149
6	-5.347159	-0.985168	2.798838
1	-3.952136	0.175423	3.971068
1	-6.465230	-2.234688	1.444483
1	-6.226024	-0.634320	3.336863
6	-0.108706	-3.253797	-2.269502
8	-0.038876	-4.432369	-1.887589
8	0.526660	-2.604643	-3.113687
1	0.686989	-3.433391	0.055015
1	1.402709	-2.975617	1.693918

IM3a

46	0.491765	-1.332399	0.156136
15	-0.250336	0.570690	-1.024136
6	0.327179	0.620380	-2.754123
6	-0.099441	1.612810	-3.652363
6	1.149600	-0.411683	-3.216707
6	0.338245	1.599152	-4.971873
1	-0.795068	2.384926	-3.324480
6	1.572135	-0.431281	-4.545663
1	1.409841	-1.237546	-2.552777
6	1.181362	0.580098	-5.418570
1	0.006956	2.376064	-5.658789
1	2.204589	-1.246858	-4.894618
1	1.514370	0.566190	-6.454995
6	-2.055613	0.780903	-1.240983
6	-2.791850	1.727718	-0.521169
6	-2.724246	-0.067498	-2.137383
6	-4.169050	1.837958	-0.708344
1	-2.291639	2.389392	0.185539
6	-4.097729	0.051326	-2.325692
1	-2.163860	-0.826988	-2.684062
6	-4.823520	1.007377	-1.613781
1	-4.729502	2.579930	-0.141298
1	-4.603286	-0.608456	-3.029132
1	-5.898561	1.097422	-1.759742
6	0.276048	2.108769	-0.184056
6	0.541008	3.319109	-0.835095
6	0.442817	2.037116	1.206050
6	0.970337	4.428045	-0.109755
1	0.440374	3.397692	-1.915462
6	0.862852	3.148581	1.932391
1	0.256581	1.088819	1.714419
6	1.132738	4.346258	1.272687
1	1.185268	5.359451	-0.631208
1	0.989168	3.074450	3.011538
1	1.471384	5.214875	1.834570
15	2.780929	-0.924111	0.294258
6	3.628096	0.137721	-0.929793
6	4.328003	-0.420274	-2.007521
6	3.489158	1.531965	-0.861294
6	4.869701	0.397367	-2.996078
1	4.444615	-1.500405	-2.084873
6	4.022970	2.345234	-1.856810
1	2.971370	1.985273	-0.016934
6	4.711216	1.779858	-2.929777
1	5.411233	-0.053369	-3.826100
1	3.903900	3.425589	-1.788584
1	5.127694	2.416730	-3.708190
6	3.177694	-0.177373	1.914550
6	2.295849	-0.394024	2.982998
6	4.334353	0.583079	2.132640
6	2.561409	0.139234	4.240877
1	1.383213	-0.968700	2.816045
6	4.593994	1.122692	3.390416
1	5.035736	0.753904	1.316699
6	3.708788	0.903565	4.444964
1	1.863791	-0.032622	5.058733
1	5.493943	1.714927	3.546360
1	3.912569	1.330895	5.425193
6	3.723358	-2.490543	0.234796
6	3.314669	-3.456502	-0.695753
6	4.800761	-2.764380	1.083683

6	3.975520	-4.678549	-0.772975
1	2.467742	-3.259227	-1.359686
6	5.453017	-3.994634	1.008411
1	5.129874	-2.022954	1.811546
6	5.041321	-4.952625	0.083863
1	3.643934	-5.422183	-1.496561
1	6.284949	-4.204339	1.678626
1	5.549312	-5.914220	0.033248
6	-1.826200	-3.115668	-0.606963
6	-1.601506	-2.344499	0.683179
1	-1.848006	-4.197242	-0.417329
1	-2.786758	-2.817899	-1.044414
8	-0.824882	-2.855731	-1.583674
6	-0.541984	-2.654934	1.566828
6	0.674920	-3.238298	1.165490
1	-0.589029	-2.223720	2.568713
6	-2.710724	-1.538361	1.242311
6	-2.450634	-0.502146	2.160577
6	-4.054508	-1.807321	0.933374
6	-3.479428	0.212196	2.759956
1	-1.414598	-0.240553	2.383917
6	-5.087568	-1.091856	1.536303
1	-4.307378	-2.610231	0.243484
6	-4.809118	-0.082584	2.453935
1	-3.242086	1.014765	3.457093
1	-6.119304	-1.332648	1.284851
1	-5.618294	0.476638	2.920085
6	0.023583	-3.966092	-2.002945
8	-0.176008	-5.058883	-1.450622
8	0.838248	-3.596638	-2.862333
1	0.708965	-3.936752	0.327081
1	1.458175	-3.366862	1.912809

TS2a

46	-0.170542	-0.353113	-0.823576
15	-0.239849	1.642783	0.516176
6	0.872095	3.049396	0.190011
6	0.768209	4.277070	0.863157
6	1.856070	2.897110	-0.793560
6	1.652741	5.313061	0.579040
1	-0.016979	4.426143	1.603982
6	2.739334	3.935812	-1.079338
1	1.918136	1.957769	-1.343661
6	2.643148	5.141457	-0.388421
1	1.563980	6.259697	1.109252
1	3.502746	3.801236	-1.844066
1	3.333270	5.953779	-0.610180
6	-1.924050	2.362373	0.497580
6	-2.971651	1.623737	1.064920
6	-2.226763	3.533188	-0.205260
6	-4.289941	2.044203	0.934195
1	-2.756304	0.692781	1.591587
6	-3.549636	3.956247	-0.332903
1	-1.431284	4.113890	-0.669748
6	-4.583639	3.213709	0.230885
1	-5.091133	1.448379	1.370552
1	-3.769399	4.868954	-0.884814
1	-5.615894	3.542290	0.122851
6	0.003666	1.176288	2.276795
6	0.631997	1.986014	3.230131
6	-0.408831	-0.111043	2.656018
6	0.846146	1.519121	4.524822
1	0.989625	2.977469	2.959921
6	-0.199004	-0.575907	3.951767
1	-0.881469	-0.760460	1.915072
6	0.435597	0.237824	4.888946
1	1.346825	2.159333	5.249658
1	-0.521250	-1.579954	4.224688
1	0.613254	-0.127019	5.899135
15	1.858538	-1.202589	-0.258967
6	3.176344	-0.080119	0.343600
6	4.167958	0.419688	-0.510520
6	3.154794	0.347756	1.679011
6	5.109587	1.332101	-0.040117
1	4.205329	0.101474	-1.551684
6	4.091714	1.266435	2.143998
1	2.408663	-0.054034	2.363919
6	5.069234	1.764629	1.283821
1	5.874101	1.710770	-0.716710
1	4.059726	1.587373	3.184158
1	5.802666	2.482050	1.647598
6	1.818852	-2.510042	1.020045
6	0.601505	-3.147312	1.286581
6	2.955963	-2.890854	1.747683
6	0.517075	-4.153332	2.245061
1	-0.289719	-2.828228	0.748748
6	2.868452	-3.888106	2.715804
1	3.911738	-2.401291	1.563150

6	1.651644	-4.522403	2.964842
1	-0.440010	-4.635414	2.439336
1	3.756436	-4.170488	3.278521
1	1.587724	-5.299472	3.724532
6	2.638114	-1.965582	-1.732733
6	2.380530	-1.380357	-2.980063
6	3.489343	-3.072743	-1.661961
6	2.972537	-1.885378	-4.133796
1	1.695117	-0.530617	-3.037000
6	4.069092	-3.587038	-2.820672
1	3.696778	-3.545368	-0.702396
6	3.816645	-2.992641	-4.055341
1	2.767511	-1.419183	-5.095930
1	4.721433	-4.456184	-2.756315
1	4.270601	-3.397221	-4.958334
6	-2.961696	-0.556228	-2.132327
6	-3.031200	-1.782755	-1.260154
1	-2.774890	-0.867453	-3.183228
1	-3.927352	-0.023077	-2.138225
8	-1.964235	0.329614	-1.698250
6	-1.887040	-2.516234	-1.167953
6	-0.639614	-2.165421	-1.832802
1	-1.874822	-3.390826	-0.512435
6	-4.235192	-2.087949	-0.485456
6	-4.157807	-2.736043	0.765713
6	-5.514217	-1.707923	-0.936517
6	-5.297505	-2.999898	1.514799
1	-3.179998	-3.007810	1.165923
6	-6.654726	-1.972744	-0.184782
1	-5.618748	-1.220000	-1.904523
6	-6.556010	-2.618628	1.046222
1	-5.201570	-3.491854	2.481995
1	-7.629546	-1.671712	-0.566281
1	-7.447903	-2.820917	1.636530
6	-1.731045	1.939953	-2.968161
8	-2.801885	2.039518	-3.467914
8	-0.593213	2.211991	-2.760802
1	-0.750372	-1.784963	-2.857966
1	0.124073	-2.947937	-1.792818

IM4

46	0.189173	0.312214	-1.173398
15	-0.088860	-1.819184	-0.096697
6	0.024798	-3.138237	-1.357619
6	0.407514	-4.448048	-1.047760
6	-0.350780	-2.827875	-2.670315
6	0.413570	-5.430493	-2.035504
1	0.701483	-4.706542	-0.030267
6	-0.352172	-3.812574	-3.655127
1	-0.622385	-1.799176	-2.916068
6	0.030848	-5.115087	-3.338536
1	0.715789	-6.445947	-1.784675
1	-0.643457	-3.559700	-4.673239
1	0.035182	-5.884757	-4.108754
6	1.261622	-2.131990	1.103260
6	1.153625	-3.119991	2.092498
6	2.419639	-1.343817	1.055820
6	2.181696	-3.314958	3.010983
1	0.255969	-3.734536	2.152848
6	3.449401	-1.543973	1.972704
1	2.499246	-0.567343	0.293102
6	3.329781	-2.526528	2.954421
1	2.082371	-4.083937	3.775150
1	4.342451	-0.921605	1.927082
1	4.129436	-2.675986	3.678013
6	-1.578465	-2.304605	0.855210
6	-2.557589	-3.153327	0.322879
6	-1.800539	-1.728410	2.115357
6	-3.732049	-3.410642	1.027309
1	-2.410252	-3.612003	-0.654622
6	-2.980518	-1.974654	2.810406
1	-1.038258	-1.089279	2.560684
6	-3.952324	-2.814997	2.267264
1	-4.480115	-4.076196	0.599167
1	-3.135345	-1.515315	3.785875
1	-4.873413	-3.011204	2.813563
15	-1.430583	1.491792	-0.123209
6	-3.153313	0.919398	-0.332960
6	-4.248142	1.641289	0.168507
6	-3.392691	-0.239390	-1.079548
6	-5.546260	1.188569	-0.042963
1	-4.084642	2.575021	0.706031
6	-4.693846	-0.688929	-1.296012
1	-2.546227	-0.783215	-1.503662
6	-5.771247	0.020020	-0.771369
1	-6.386397	1.755715	0.354054
1	-4.862806	-1.595258	-1.875770
1	-6.788705	-0.329122	-0.939156

6	-1.048986	1.495848	1.671196
6	0.300364	1.364915	2.031776
6	-2.009390	1.617186	2.681466
6	0.682375	1.355437	3.370928
1	1.052048	1.252061	1.246778
6	-1.627881	1.599531	4.021112
1	-3.065609	1.698537	2.431114
6	-0.284043	1.469553	4.369377
1	1.735840	1.254260	3.631115
1	-2.387392	1.682734	4.796878
1	0.008381	1.453736	5.417685
6	-1.568245	3.277782	-0.511330
6	-2.327615	3.689506	-1.615801
6	-0.822870	4.231595	0.191874
6	-2.351781	5.027894	-1.996739
1	-2.904223	2.958480	-2.183200
6	-0.845529	5.570431	-0.194606
1	-0.218142	3.930185	1.047385
6	-1.610143	5.972429	-1.287571
1	-2.951777	5.332718	-2.852432
1	-0.265286	6.301688	0.365787
1	-1.629071	7.018767	-1.586428
6	2.965203	0.002653	-2.334082
6	3.184677	1.218578	-1.450539
1	3.011873	0.342855	-3.395354
1	3.818532	-0.691883	-2.208489
8	1.777351	-0.690580	-2.100305
6	2.175923	2.134428	-1.426225
6	0.953823	1.988185	-2.200980
1	2.246203	2.992897	-0.751103
6	4.377189	1.335575	-0.611742
6	5.609751	0.776596	-1.004444
6	4.333245	1.981907	0.642707
6	6.736191	0.864031	-0.191934
1	5.691162	0.288869	-1.974953
6	5.459213	2.068902	1.452275
1	3.387288	2.393749	0.996073
6	6.671420	1.510117	1.041635
1	7.675948	0.430192	-0.531483
1	5.386910	2.564238	2.420114
1	7.552097	1.573756	1.678220
1	1.093799	1.566715	-3.204737
1	0.315617	2.874543	-2.228155

TS2b

46	0.157292	-0.776787	-0.887043
15	1.294487	0.918559	0.298339
6	0.614801	0.925002	1.999268
6	0.419119	2.066231	2.783264
6	0.316276	-0.333972	2.545338
6	-0.064974	1.948068	4.085298
1	0.625732	3.055553	2.379516
6	-0.152140	-0.450433	3.851126
1	0.458926	-1.230060	1.935536
6	-0.344419	0.693331	4.624525
1	-0.229020	2.846255	4.678850
1	-0.373824	-1.437374	4.256256
1	-0.720607	0.609099	5.642655
6	3.103436	0.891075	0.599846
6	3.975907	1.478969	-0.326903
6	3.643984	0.235257	1.715482
6	5.353068	1.436045	-0.126638
1	3.576892	1.980454	-1.208686
6	5.022052	0.192492	1.910450
1	2.985930	-0.237393	2.444327
6	5.880284	0.796696	0.993571
1	6.016023	1.899621	-0.855700
1	5.424474	-0.312286	2.787181
1	6.957390	0.764287	1.148368
6	1.045248	2.547642	-0.488267
6	1.503459	3.757326	0.054721
6	0.410982	2.566468	-1.737484
6	1.270247	4.957888	-0.610295
1	2.059082	3.761855	0.991671
6	0.190345	3.766036	-2.409794
1	0.078115	1.623863	-2.177168
6	0.607642	4.965704	-1.838491
1	1.619993	5.891752	-0.173974
1	-0.312396	3.759209	-3.376291
1	0.431512	5.907632	-2.355184
15	-2.052332	-0.055822	-0.604960
6	-2.531368	1.257689	0.581222
6	-3.022990	0.949400	1.856333
6	-2.358318	2.606345	0.234069
6	-3.334864	1.964909	2.758096
1	-3.168880	-0.088688	2.152183
6	-2.665748	3.618125	1.139042
1	-1.998362	2.870551	-0.759030

6	-3.155309	3.300665	2.405157
1	-3.717327	1.705119	3.744123
1	-2.524325	4.658151	0.847639
1	-3.395844	4.091576	3.113587
6	-2.757477	0.537766	-2.183652
6	-2.057704	0.295101	-3.373161
6	-3.970652	1.240173	-2.241300
6	-2.560284	0.738790	-4.594503
1	-1.102544	-0.232947	-3.332831
6	-4.472722	1.679693	-3.462706
1	-4.522390	1.450581	-1.325290
6	-3.769339	1.429521	-4.640481
1	-2.002903	0.547288	-5.509673
1	-5.415704	2.222658	-3.493532
1	-4.160807	1.780860	-5.593393
6	-3.085150	-1.473844	-0.077322
6	-2.535485	-2.387284	0.834741
6	-4.393919	-1.669870	-0.530491
6	-3.285595	-3.466594	1.292764
1	-1.503262	-2.256625	1.172682
6	-5.138298	-2.758539	-0.081009
1	-4.836753	-0.975853	-1.243094
6	-4.588417	-3.655314	0.832749
1	-2.846330	-4.167670	2.000381
1	-6.152792	-2.904331	-0.448093
1	-5.172183	-4.505578	1.180800
6	1.798994	-2.903198	0.229100
6	1.922617	-2.307768	-1.175795
1	2.360836	-2.183681	0.899000
1	0.726981	-2.767162	0.556077
8	2.232871	-4.164413	0.262567
6	0.897936	-2.431221	-2.141880
6	-0.457589	-2.630585	-1.802270
1	1.132506	-2.173919	-3.178269
6	3.271296	-1.917720	-1.627180
6	3.471515	-1.048377	-2.715312
6	4.404607	-2.413349	-0.958123
6	4.753502	-0.722948	-3.145652
1	2.609088	-0.598322	-3.210939
6	5.685592	-2.083611	-1.389906
1	4.243971	-3.115804	-0.139825
6	5.868292	-1.247040	-2.491180
1	4.883033	-0.042897	-3.986770
1	6.549846	-2.489940	-0.865223
1	6.872237	-0.992399	-2.827775
6	1.471235	-4.152569	2.757449
8	2.483560	-3.718107	3.157824
8	0.398562	-4.570244	2.533789
1	-0.728840	-3.223288	-0.928023
1	-1.201515	-2.625956	-2.599532

IM4b

46	0.189173	0.312214	-1.173398
15	-0.088860	-1.819184	-0.096697
6	0.024798	-3.138237	-1.357619
6	0.407514	-4.448048	-1.047760
6	-0.350780	-2.827875	-2.670315
6	0.413570	-5.430493	-2.035504
1	0.701483	-4.706542	-0.030267
6	-0.352172	-3.812574	-3.655127
1	-0.622385	-1.799176	-2.916068
6	0.030848	-5.115087	-3.338536
1	0.715789	-6.445947	-1.784675
1	-0.643457	-3.559700	-4.673239
1	0.035182	-5.884757	-4.108754
6	1.261622	-2.131990	1.103260
6	1.153625	-3.119991	2.092498
6	2.419639	-1.343817	1.055820
6	2.181696	-3.314958	3.010983
1	0.255969	-3.734536	2.152848
6	3.449401	-1.543973	1.972704
1	2.499246	-0.567343	0.293102
6	3.329781	-2.526528	2.954421
1	2.082371	-4.083937	3.775150
1	4.342451	-0.921605	1.927082
1	4.129436	-2.675986	3.678013
6	-1.578465	-2.304605	0.855210
6	-2.557589	-3.153327	0.322879
6	-1.800539	-1.728410	2.115357
6	-3.732049	-3.410642	1.027309
1	-2.410252	-3.612003	-0.654622
6	-2.980518	-1.974654	2.810406
1	-1.038258	-1.089279	2.560684
6	-3.952324	-2.814997	2.267264
1	-4.480115	-4.076196	0.599167
1	-3.135345	-1.515315	3.785875
1	-4.873413	-3.011204	2.813563
15	-1.430583	1.491792	-0.123209

6	-3.153313	0.919398	-0.332960
6	-4.248142	1.641289	0.168507
6	-3.392691	-0.239390	-1.079548
6	-5.546260	1.188569	-0.042963
1	-4.084642	2.575021	0.706031
6	-4.693846	-0.688929	-1.296012
1	-2.546227	-0.783215	-1.503662
6	-5.771247	0.020020	-0.771369
1	-6.386397	1.755715	0.354054
1	-4.862806	-1.595258	-1.875770
1	-6.788705	-0.329122	-0.939156
6	-1.048986	1.495848	1.671196
6	0.300364	1.364915	2.031776
6	-2.009390	1.617186	2.681466
6	0.682375	1.355437	3.370928
1	1.052048	1.252061	1.246778
6	-1.627881	1.599531	4.021112
1	-3.065609	1.698537	2.431114
6	-0.284043	1.469553	4.369377
1	1.735840	1.254260	3.631115
1	-2.387392	1.682734	4.796878
1	0.008381	1.453736	5.417685
6	-1.568245	3.277782	-0.511330
6	-2.327615	3.689506	-1.615801
6	-0.822870	4.231595	0.191874
6	-2.351781	5.027894	-1.996739
1	-2.904223	2.958480	-2.183200
6	-0.845529	5.570431	-0.194606
1	-0.218142	3.930185	1.047385
6	-1.610143	5.972429	-1.287571
1	-2.951777	5.332718	-2.852432
1	-0.265286	6.301688	0.365787
1	-1.629071	7.018767	-1.586428
6	2.965203	0.002653	-2.334082
6	3.184677	1.218578	-1.450539
1	3.011873	0.342855	-3.395354
1	3.818532	-0.691883	-2.208489
8	1.777351	-0.690580	-2.100305
6	2.175923	2.134428	-1.426225
6	0.953823	1.988185	-2.200980
1	2.246203	2.992897	-0.751103
6	4.377189	1.335575	-0.611742
6	5.609751	0.776596	-1.004444
6	4.333245	1.981907	0.642707
6	6.736191	0.864031	-0.191934
1	5.691162	0.288869	-1.974953
6	5.459213	2.068902	1.452275
1	3.387288	2.393749	0.996073
6	6.671420	1.510117	1.041635
1	7.675948	0.430192	-0.531483
1	5.386910	2.564238	2.420114
1	7.552097	1.573756	1.678220
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1	0.315617	2.874543	-2.228155

CO_2

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8	0.000000	0.000000	-1.168264

1-IM5-O

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15	-5.769826	7.409111	9.251963
6	-6.070887	5.846873	10.160964
6	-5.355568	5.486484	11.308823
6	-7.067084	4.984004	9.681143
6	-5.639598	4.294122	11.970635
1	-4.569681	6.135941	11.690882
6	-7.358840	3.799995	10.353023
1	-7.608847	5.243166	8.770933
6	-6.643782	3.452095	11.498190
1	-5.072528	4.024390	12.859943
1	-8.139122	3.142280	9.973658
1	-6.865536	2.521627	12.018236
6	-4.139819	8.002913	9.833526
6	-3.941675	8.541283	11.113629
6	-3.046056	7.902187	8.964060
6	-2.677459	8.966475	11.511471
1	-4.782548	8.632028	11.801201
6	-1.780991	8.328097	9.363621
1	-3.199568	7.493562	7.962791
6	-1.596016	8.862539	10.636928
1	-2.537064	9.383214	12.507246
1	-0.941660	8.249994	8.673736
1	-0.609461	9.201045	10.948983
6	-6.957201	8.584906	10.008943
6	-8.233861	8.160737	10.401400
6	-6.642643	9.949173	10.103255

6	-9.166713	9.074579	10.884785	1	-7.113158	3.454836	5.301603
1	-8.502819	7.106725	10.338400	6	-1.639024	5.449593	4.641034
6	-7.577340	10.860376	10.588266	6	-1.051992	6.295074	5.599981
1	-5.654531	10.301833	9.809077	6	-0.901964	5.091410	3.501325
6	-8.841992	10.426528	10.980403	6	0.241631	6.761973	5.421021
1	10.150308	8.724849	11.194104	1	-1.630920	6.581205	6.475920
1	-7.311658	11.913600	10.661920	6	0.390828	5.566567	3.325517
1	-9.570577	11.138824	11.363063	1	-1.337224	4.440506	2.743379
6	-4.793370	7.771888	4.222786	6	0.966116	6.400804	4.283951
6	-4.064431	8.912472	4.900526	1	0.686385	7.419890	6.165489
1	-5.228411	8.175482	3.280279	1	0.952349	5.285485	2.437346
1	-4.003029	7.067765	3.861707	1	1.978029	6.775674	4.141750
8	-5.774844	7.117806	4.921698	17	-8.629949	-0.300301	0.245154
6	-4.559625	9.507129	6.017543	1	-6.710968	9.258890	6.026379
6	-5.830598	9.216304	6.679664	1	-5.997608	9.832584	7.568358
1	-3.941827	10.270546	6.497992				
6	-2.786891	9.335778	4.304154	**1-TS5-O**			
6	-2.500949	9.072160	2.949704	46	-4.855395	6.900285	6.859379
6	-1.787986	9.986976	5.055401	15	-7.003420	6.741851	6.070769
6	-1.293279	9.457978	2.374763	6	-6.964057	6.433700	4.265563
1	-3.244448	8.578261	2.326261	6	-8.075664	5.988240	3.538327
6	-0.584279	10.374647	4.479854	6	-5.781079	6.750763	3.583597
1	-1.948597	10.171543	6.117197	6	-8.010136	5.881077	2.151535
6	-0.327031	10.115481	3.132834	1	-8.998387	5.720442	4.051216
1	-1.110023	9.244766	1.322359	6	-5.722479	6.645381	2.194757
1	0.167136	10.870797	5.093174	1	-4.895264	7.061924	4.145547
1	0.617826	10.416636	2.683631	6	-6.837311	6.218675	1.476253
6	-2.999390	4.982739	4.855682	1	-8.878506	5.527756	1.596662
6	-5.199443	3.861781	4.700768	1	-4.796260	6.889173	1.675584
6	-4.970813	4.738357	5.868973	1	-6.789502	6.132175	0.391843
7	-3.712051	5.306320	5.895224	6	-8.155358	5.533494	6.816276
8	-5.816689	4.929385	6.761615	6	-9.536009	5.587163	6.567998
16	-3.775822	3.888654	3.680821	6	-7.654265	4.544773	7.672111
6	-6.389873	3.237500	4.512795	6	-10.388558	4.643522	7.133051
6	-6.867149	2.375422	3.459834	1	-9.948677	6.377001	5.940629
6	-6.060793	1.845989	2.433128	6	-8.513271	3.606394	8.242471
6	-8.235442	2.034547	3.464340	1	-6.585801	4.512303	7.885085
6	-6.594640	1.026709	1.450829	6	-9.878084	3.649076	7.967436
1	-4.992504	2.046713	2.401057	1	-11.456490	4.690789	6.927382
6	-8.786210	1.223347	2.485188	1	-8.112652	2.843123	8.907452
1	-8.874585	2.426047	4.254378	1	-10.548479	2.915449	8.411699
6	-7.955755	0.727415	1.482676	6	-7.944098	8.308708	6.196945
1	-5.959574	0.618128	0.669386	6	-8.022559	9.205784	5.126049
1	-9.843853	0.974846	2.498762	6	-8.496299	8.674471	7.433389

6	-8.648689	10.441189	5.286570	1	-5.898033	3.437787	6.066003
1	-7.592371	8.943951	4.159677	6	-0.575184	5.598588	4.997327
6	-9.124222	9.906549	7.588551	6	0.385271	5.638423	6.018165
1	-8.432431	7.990522	8.280723	6	-0.201020	5.956198	3.693888
6	-9.200023	10.794728	6.515452	6	1.695388	6.013909	5.736153
1	-8.704756	11.127948	4.443643	1	0.091204	5.363828	7.028774
1	-9.552988	10.175316	8.552602	6	1.106600	6.329623	3.415922
1	-9.688334	11.759678	6.638854	1	-0.945347	5.962253	2.897536
6	-2.137616	8.118484	6.008587	6	2.059588	6.359744	4.436965
6	-2.610006	8.119723	7.464497	1	2.432136	6.039749	6.537857
1	-2.241158	9.157530	5.623380	1	1.385246	6.605352	2.400791
1	-1.045262	7.919323	5.994413	1	3.083903	6.654534	4.216261
8	-2.817168	7.229136	5.209434	17	-8.653133	1.544846	0.513289
6	-3.843572	8.674403	7.782341	1	-4.512441	9.222348	5.770627
6	-4.828248	8.963262	6.784937	1	-5.747742	9.452694	7.106669
1	-4.133061	8.757180	8.831498				
6	-1.741841	7.634640	8.543058	**1-IM6-O**			
6	-0.347418	7.808170	8.496116	46	-5.181977	7.217693	5.503304
6	-2.290043	6.983582	9.664926	15	-7.164380	6.583305	4.557919
6	0.462545	7.357942	9.534477	6	-6.928663	5.921132	2.872366
1	0.106859	8.321961	7.650710	6	-7.951229	5.231133	2.207737
6	-1.478672	6.522710	10.693203	6	-5.705802	6.127731	2.221545
1	-3.365407	6.804961	9.698068	6	-7.748721	4.750019	0.917720
6	-0.096608	6.709066	10.633606	1	-8.908955	5.065679	2.700585
1	1.539096	7.513792	9.480797	6	-5.504212	5.641626	0.932190
1	-1.924881	6.005536	11.541106	1	-4.903530	6.653490	2.744137
1	0.540424	6.346373	11.438461	6	-6.523780	4.949434	0.280904
6	-1.949437	5.234070	5.321512	1	-8.546669	4.209276	0.411927
6	-4.170915	4.147399	5.223785	1	-4.543242	5.791167	0.442109
6	-3.650756	4.582096	6.558858	1	-6.361140	4.554833	-0.721178
7	-2.348180	4.955594	6.549806	6	-8.194238	5.360204	5.443447
8	-4.387021	4.632845	7.577331	6	-9.584260	5.301467	5.259377
16	-2.991133	4.559621	4.008412	6	-7.578227	4.451357	6.313922
6	-5.381270	3.546981	5.110281	6	-10.337750	4.334643	5.918585
6	-6.106379	3.047063	3.965536	1	-10.079185	6.014243	4.600254
6	-7.429847	2.605193	4.170683	6	-8.338733	3.484812	6.969286
6	-5.589426	2.979500	2.657409	1	-6.502312	4.512405	6.480749
6	-8.214130	2.139479	3.126893	6	-9.716316	3.423339	6.771683
1	-7.848652	2.642729	5.176845	1	-11.414974	4.295639	5.766454
6	-6.358027	2.507281	1.602263	1	-7.851578	2.783427	7.644505
1	-4.568125	3.289759	2.446569	1	-10.308605	2.669866	7.287998
6	-7.667447	2.100656	1.845736	6	-8.295565	8.001465	4.338652
1	-9.237218	1.815825	3.301135	6	-8.523642	8.585915	3.088491
1	-5.945829	2.462498	0.597217	6	-8.869870	8.580402	5.480269

6	-9.319333	9.726280	2.981780	1	-5.239368	3.776966	4.932995
1	-8.080588	8.153282	2.192061	6	0.077081	5.457688	5.711701
6	-9.668292	9.713459	5.368432	6	0.183999	4.412921	6.633319
1	-8.692352	8.138149	6.461523	6	1.238952	5.994278	5.149093
6	-9.892652	10.291213	4.117859	6	1.433383	3.918929	6.995599
1	-9.490865	10.171527	2.003336	1	-0.722232	3.995425	7.070025
1	-10.114257	10.149363	6.260792	6	2.488463	5.498436	5.512980
1	-10.514322	11.180440	4.031944	1	1.160362	6.805584	4.429053
6	-2.278116	8.061280	4.613510	6	2.590631	4.461345	6.438097
6	-3.043428	8.614318	5.807563	1	1.504215	3.109765	7.720752
1	-2.945164	7.476559	3.956272	1	3.387152	5.927678	5.072495
1	-1.908553	8.900469	4.008235	1	3.568239	4.077769	6.725492
8	-1.115960	7.305674	4.903126	17	-5.667347	0.362271	-0.568762
6	-4.279012	9.234694	5.630377	1	-4.731529	8.829989	3.518045
6	-5.145091	9.030339	4.510114	1	-6.070130	9.607642	4.488060
1	-4.679229	9.789988	6.479528				
6	-2.390096	8.737517	7.120044	**1-IM5-N**			
6	-1.008833	8.964164	7.250553	46	-0.947784	-0.300455	-1.292344
6	-3.164650	8.664512	8.291980	15	-1.929664	-1.943298	-0.098511
6	-0.433507	9.122361	8.507513	6	-1.934709	-3.602084	-0.863420
1	-0.385285	9.025728	6.363075	6	-2.165134	-4.772229	-0.124646
6	-2.585716	8.814718	9.545323	6	-1.696036	-3.702784	-2.239744
1	-4.229615	8.443016	8.208695	6	-2.169827	-6.012904	-0.755015
6	-1.214731	9.046391	9.659261	1	-2.333060	-4.712433	0.950766
1	0.636596	9.307475	8.585591	6	-1.700708	-4.945869	-2.868918
1	-3.204389	8.739256	10.437886	1	-1.492016	-2.795864	-2.811521
1	-0.757201	9.160545	10.640274	6	-1.940488	-6.101114	-2.127865
6	-1.286785	5.970590	5.325966	1	-2.351255	-6.914205	-0.172033
6	-3.381875	4.569559	4.561174	1	-1.509511	-5.011151	-3.938605
6	-3.411630	5.284561	5.893564	1	-1.940412	-7.073232	-2.618119
7	-2.278741	5.818855	6.284241	6	-1.130608	-2.198735	1.530094
8	-4.497895	5.338733	6.573543	6	-1.504363	-1.425550	2.637425
16	-1.886410	4.896194	3.742326	6	-0.007238	-3.031641	1.636151
6	-4.424382	3.776717	4.206011	6	-0.768113	-1.477759	3.819265
6	-4.649451	2.950205	3.039755	1	-2.374391	-0.770671	2.575022
6	-5.866120	2.241348	2.962292	6	0.727444	-3.080544	2.817454
6	-3.749069	2.809102	1.965249	1	0.303798	-3.635723	0.785409
6	-6.183934	1.444326	1.872282	6	0.352522	-2.301432	3.911453
1	-6.581801	2.332056	3.780246	1	-1.074117	-0.872690	4.671045
6	-4.049057	2.012512	0.867739	1	1.601198	-3.727948	2.878716
1	-2.797603	3.336698	1.973354	1	0.929904	-2.338612	4.833474
6	-5.267701	1.340883	0.828566	6	-3.679048	-1.591054	0.328124
1	-7.132844	0.914946	1.829432	6	-4.645903	-2.586276	0.513613
1	-3.342796	1.919295	0.046186	6	-4.050542	-0.249058	0.495678

6	-5.949834	-2.245725	0.867606
1	-4.387134	-3.634961	0.375711
6	-5.349593	0.089340	0.864722
1	-3.313839	0.535683	0.314646
6	-6.303368	-0.910134	1.050026
1	-6.692895	-3.030102	1.000923
1	-5.618269	1.136570	0.997334
1	-7.322650	-0.648230	1.328196
6	-0.712179	2.363810	-2.534124
6	-2.213149	2.433555	-2.344569
1	-0.477381	2.887935	-3.487779
1	-0.270203	3.030190	-1.749593
8	-0.134662	1.123663	-2.570069
6	-2.984133	1.314147	-2.347957
6	-2.546811	-0.072418	-2.565656
1	-4.046694	1.444475	-2.120807
6	-2.778122	3.764081	-2.066603
6	-2.124857	4.932420	-2.505790
6	-3.942136	3.934669	-1.290703
6	-2.610334	6.198393	-2.191205
1	-1.227695	4.849847	-3.116944
6	-4.428434	5.198479	-0.978769
1	-4.454740	3.056570	-0.897980
6	-3.765256	6.342420	-1.425572
1	-2.080828	7.079568	-2.551630
1	-5.326651	5.291424	-0.369346
1	-4.143036	7.332408	-1.175398
6	1.359411	0.780012	0.665932
6	3.146688	-0.919687	0.499967
6	1.897759	-1.213167	-0.247836
7	0.930789	-0.209362	-0.067988
8	1.720486	-2.193472	-0.955608
16	2.999589	0.626855	1.308083
6	4.170323	-1.808905	0.498498
6	5.467918	-1.796979	1.125916
6	6.304566	-2.908341	0.895622
6	5.956833	-0.760867	1.946083
6	7.571913	-2.990969	1.448501
1	5.944004	-3.719033	0.264550
6	7.221217	-0.829608	2.509218
1	5.354991	0.119894	2.158200
6	8.018400	-1.944847	2.252477
1	8.206770	-3.851939	1.258183
1	7.587770	-0.025369	3.141293
1	3.949410	-2.697941	-0.097284
6	0.579687	1.967855	0.976261
6	1.196845	3.221296	1.109716
6	-0.815167	1.866002	1.115674
6	0.425541	4.355668	1.335184
1	2.275984	3.313731	0.992180
6	-1.576742	3.000304	1.362817
1	-1.284270	0.885188	1.056384
6	-0.960176	4.249298	1.455812
1	0.907811	5.327574	1.411769
1	-2.655805	2.910659	1.480890
1	-1.561741	5.140719	1.626955
17	9.612789	-2.029996	2.950736
1	-2.058397	-0.248349	-3.531818
1	-3.364271	-0.791274	-2.429713

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46	-0.363124	-0.651285	-0.539645
15	-1.080449	-2.589454	0.282558
6	-0.094982	-4.037706	-0.224251
6	-0.252969	-5.283542	0.399423
6	0.858327	-3.891931	-1.238483
6	0.525375	-6.366549	0.003804
1	-0.988829	-5.404358	1.195225
6	1.638640	-4.978077	-1.630677
1	0.991442	-2.913810	-1.705163
6	1.471965	-6.214191	-1.010286
1	0.396733	-7.331473	0.490853
1	2.382056	-4.855241	-2.416010
1	2.084398	-7.061835	-1.312339
6	-1.039604	-2.654212	2.109927
6	-2.141358	-3.027373	2.888039
6	0.167914	-2.317045	2.741843
6	-2.037874	-3.060732	4.278030
1	-3.081992	-3.301260	2.412164
6	0.266350	-2.361869	4.128846
1	1.030465	-2.011346	2.143767
6	-0.836775	-2.729405	4.900121
1	-2.900992	-3.351830	4.874084
1	1.207934	-2.102773	4.610673
1	-0.759039	-2.756656	5.985575
6	-2.808516	-2.962183	-0.169747
6	-3.186215	-4.122457	-0.852358
6	-3.778187	-1.983942	0.101957

6	-4.510426	-4.304369	-1.250973
1	-2.446261	-4.887400	-1.082859
6	-5.099812	-2.173292	-0.286705
1	-3.490970	-1.064452	0.617529
6	-5.467615	-3.333707	-0.969865
1	-4.789628	-5.209395	-1.787604
1	-5.842495	-1.407846	-0.067779
1	-6.499988	-3.476966	-1.284077
6	-0.515517	2.006669	-2.142102
6	-1.968915	1.590569	-2.115318
1	-0.108903	1.908666	-3.162860
1	-0.411753	3.068820	-1.872230
8	0.342795	1.232931	-1.315519
6	-2.305046	0.270716	-2.190650
6	-1.387184	-0.856424	-2.308844
1	-3.364592	0.017143	-2.111965
6	-3.000678	2.628359	-1.990594
6	-2.796585	3.924853	-2.500809
6	-4.223647	2.371365	-1.340371
6	-3.768443	4.912660	-2.369007
1	-1.873206	4.156728	-3.030620
6	-5.190649	3.359997	-1.205304
1	-4.397914	1.390311	-0.898715
6	-4.969944	4.638799	-1.718290
1	-3.585047	5.903640	-2.781773
1	-6.118210	3.134637	-0.680453
1	-5.726195	5.413870	-1.608137
6	0.724047	1.707884	0.406636
6	3.197570	1.302060	0.426271
6	2.330165	0.125181	0.772909
7	1.001671	0.450483	0.850947
8	2.792333	-1.000311	0.968613
16	2.214060	2.737246	0.253765
6	4.530552	1.139715	0.268789
6	5.578227	2.064764	-0.104779
6	6.856220	1.530383	-0.364327
6	5.415565	3.457905	-0.229662
6	7.920670	2.331547	-0.747700
1	7.007202	0.456228	-0.266219
6	6.471323	4.275600	-0.608393
1	4.458904	3.929439	-0.015302
6	7.714152	3.703427	-0.869052
1	8.898268	1.899947	-0.946748
1	6.331585	5.349860	-0.696860
1	4.852994	0.109471	0.435561
6	-0.496124	2.403008	0.880333
6	-0.697188	3.767184	0.636350
6	-1.477541	1.686602	1.582733
6	-1.852427	4.402896	1.084687
1	0.052187	4.345499	0.095225
6	-2.629026	2.324497	2.029039
1	-1.322043	0.627130	1.785386
6	-2.820999	3.684265	1.780652
1	-1.996489	5.462423	0.880727
1	-3.379369	1.756617	2.577007
1	-3.725597	4.181128	2.127324
17	9.043807	4.730908	-1.351260
1	-0.548759	-0.708722	-3.004748
1	-1.884135	-1.812456	-2.497992

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46	-0.539147	3.217146	1.438858
15	1.664637	2.673306	1.935469
6	2.206786	1.100279	1.185167
6	3.485033	0.895650	0.654785
6	1.279125	0.049790	1.159014
6	3.833681	-0.344458	0.125156
1	4.207858	1.710158	0.639528
6	1.637065	-1.195386	0.646413
1	0.265956	0.212904	1.534619
6	2.915254	-1.393937	0.128526
1	4.827278	-0.489199	-0.296267
1	0.906401	-2.002819	0.629389
1	3.189164	-2.360044	-0.293626
6	2.880962	3.968725	1.528645
6	4.186189	3.935631	2.039000
6	2.478458	5.055200	0.743659
6	5.078090	4.964344	1.749294
1	4.504089	3.104513	2.668944
6	3.368973	6.088986	0.465344
1	1.463721	5.071761	0.345160
6	4.669489	6.042314	0.964509
1	6.092390	4.926924	2.142742
1	3.046906	6.932371	-0.142901
1	5.365796	6.850269	0.746287
6	1.961328	2.428166	3.729833
6	2.122052	1.166576	4.310834
6	1.954850	3.561220	4.558643

6	2.279103	1.041360	5.691559
1	2.133960	0.273169	3.688456
6	2.117778	3.434036	5.933630
1	1.820782	4.551202	4.119669
6	2.279362	2.170987	6.504846
1	2.409025	0.052882	6.128834
1	2.117030	4.323297	6.561520
1	2.406102	2.070305	7.581194
6	-3.233369	2.261534	1.060799
6	-2.704293	3.649276	1.359380
1	-3.397636	1.703417	1.987411
1	-4.195707	2.332279	0.537801
8	-2.361602	1.377412	0.312019
6	-2.127213	4.001366	2.616508
6	-1.364006	3.096495	3.385269
1	-2.054568	5.065909	2.847938
6	-3.153257	4.791455	0.516393
6	-4.448692	4.865885	-0.016616
6	-2.276237	5.860240	0.269083
6	-4.848504	5.969692	-0.765716
1	-5.164644	4.065718	0.165030
6	-2.671231	6.957507	-0.488435
1	-1.257233	5.804143	0.658793
6	-3.962418	7.017091	-1.010959
1	-5.861031	6.005452	-1.165552
1	-1.965114	7.764575	-0.677035
1	-4.274755	7.872469	-1.607257
6	-1.761493	1.859564	-0.889515
6	0.406828	0.958706	-2.007404
6	0.529286	2.274911	-1.280789
7	-0.602592	2.643603	-0.638762
8	1.596887	2.900236	-1.252046
16	-1.160413	0.254770	-1.745916
6	1.484539	0.465145	-2.662979
6	1.705341	-0.801067	-3.326708
6	2.979172	-1.035679	-3.884848
6	0.753127	-1.833953	-3.431607
6	3.294342	-2.225478	-4.522717
1	3.738358	-0.258081	-3.803903
6	1.051614	-3.032962	-4.065922
1	-0.244479	-1.711534	-3.015440
6	2.319718	-3.217155	-4.609813
1	4.282680	-2.383960	-4.947176
1	0.303139	-3.817991	-4.140314
1	2.342806	1.140103	-2.643999
6	-2.766499	2.489788	-1.835555
6	-4.035203	1.916911	-1.986197
6	-2.425373	3.598393	-2.613409
6	-4.949571	2.451464	-2.887695
1	-4.299300	1.040203	-1.394493
6	-3.338718	4.128314	-3.523201
1	-1.441232	4.048824	-2.495629
6	-4.603564	3.560232	-3.661185
1	-5.934156	1.998193	-2.991300
1	-3.061785	4.996745	-4.119260
1	-5.317777	3.977593	-4.368903
17	2.695099	-4.722819	-5.419445
1	-1.607650	2.031135	3.420436
1	-0.834595	3.474490	4.259462

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46	-1.673751	7.195515	3.974028
15	-1.074417	8.032279	1.967486
6	-0.180338	6.815253	0.930439
6	-0.517678	6.513012	-0.394055
6	0.852778	6.089396	1.543949
6	0.164485	5.512539	-1.086001
1	-1.327280	7.043898	-0.890749
6	1.547793	5.107470	0.844654
1	1.100861	6.285532	2.589061
6	1.200671	4.812666	-0.473134
1	-0.119479	5.282506	-2.111612
1	2.352420	4.561933	1.335829
1	1.731588	4.033560	-1.016842
6	-2.471115	8.659378	0.974016
6	-2.276939	9.305199	-0.256606
6	-3.770713	8.528555	1.476458
6	-3.365740	9.788267	-0.975575
1	-1.268258	9.436016	-0.649262
6	-4.858853	9.030098	0.764257
1	-3.922823	8.034272	2.437798
6	-4.657158	9.655676	-0.463478
1	-3.205782	10.280634	-1.933156
1	-5.864607	8.924978	1.168692
1	-5.506334	10.041166	-1.025536
6	0.045390	9.490651	2.045552
6	1.429720	9.341245	2.205389
6	-0.494449	10.785910	2.048294

6	2.252026	10.455740	2.347183
1	1.878018	8.349056	2.209901
6	0.330451	11.898503	2.194020
1	-1.566576	10.931798	1.923974
6	1.705797	11.738181	2.342477
1	3.326174	10.318425	2.458669
1	-0.107967	12.895006	2.186465
1	2.350523	12.608368	2.450913
6	-2.986386	7.210938	6.700224
6	-4.091409	7.961361	5.976653
1	-2.399367	7.946184	7.297551
1	-3.430456	6.513738	7.434131
8	-2.154440	6.489454	5.851340
6	-3.693216	8.821821	5.004160
6	-2.288396	9.044766	4.664846
1	-4.440495	9.343587	4.401244
6	-5.499770	7.688097	6.264104
6	-5.916384	7.256553	7.538261
6	-6.489222	7.817412	5.267339
6	-7.254132	6.981419	7.804706
1	-5.184524	7.161519	8.338910
6	-7.823919	7.540958	5.534758
1	-6.194412	8.109096	4.258550
6	-8.216845	7.122388	6.807223
1	-7.546747	6.659586	8.803223
1	-8.563052	7.640563	4.740751
1	-9.262246	6.902256	7.015855
6	-0.980324	3.956860	5.153352
6	-3.175106	4.393741	4.063647
6	-3.195244	3.967624	5.495858
7	-1.914880	3.669250	5.987420
8	-4.216030	3.841081	6.151818
16	-1.508030	4.579262	3.534270
6	-4.321995	4.617594	3.384101
6	-4.572945	5.035343	2.023301
6	-5.897086	5.380120	1.683395
6	-3.592487	5.115164	1.013767
6	-6.237254	5.794267	0.405035
1	-6.670459	5.321846	2.448786
6	-3.921422	5.512121	-0.274960
1	-2.558740	4.833286	1.210455
6	-5.239533	5.854210	-0.565959
1	-7.261648	6.064554	0.161804
1	-3.160149	5.555849	-1.050098
1	-5.212056	4.475086	4.002482
6	0.441355	3.868088	5.448085
6	0.844682	3.710516	6.785055
6	1.415208	3.964027	4.443226
6	2.194070	3.663311	7.104214
1	0.084840	3.641563	7.559829
6	2.764930	3.914387	4.768217
1	1.117431	4.061001	3.399357
6	3.156748	3.769486	6.098769
1	2.499062	3.549973	8.142502
1	3.513550	3.986624	3.981785
1	4.214426	3.736375	6.352825
17	-5.648761	6.369908	-2.181890
1	-1.622622	9.155613	5.533200
1	-2.124804	9.858674	3.952483

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46	1.768658	1.611007	-0.342807
15	3.047425	3.181099	-1.320071
6	4.218647	4.091897	-0.245514
6	5.404541	4.645188	-0.744700
6	3.911517	4.250582	1.111884
6	6.268249	5.336071	0.100870
1	5.671695	4.519548	-1.792751
6	4.775417	4.944970	1.955807
1	2.988507	3.826386	1.509648
6	5.957667	5.484564	1.451952
1	7.193311	5.749246	-0.297752
1	4.525337	5.058200	3.009181
1	6.638078	6.018891	2.112568
6	4.049664	2.531001	-2.698243
6	4.546672	3.338432	-3.732223
6	4.347254	1.162357	-2.700470
6	5.326424	2.783225	-4.742739
1	4.317849	4.403620	-3.750551
6	5.127378	0.608733	-3.713120
1	3.960393	0.531297	-1.896643
6	5.617495	1.418938	-4.734819
1	5.706328	3.418817	-5.540603
1	5.349780	-0.457426	-3.701934
1	6.225590	0.988013	-5.528286
6	2.008380	4.507625	-2.037248
6	1.558986	5.547982	-1.211033
6	1.542506	4.442018	-3.357792

6	0.674790	6.505364	-1.699312
1	1.902520	5.611587	-0.178185
6	0.658195	5.402677	-3.842592
1	1.880428	3.643985	-4.017571
6	0.221603	6.435686	-3.015990
1	0.340786	7.310676	-1.047258
1	0.313612	5.342789	-4.873434
1	-0.468431	7.186120	-3.397082
6	-0.271657	-0.701752	-0.095100
6	0.690002	-1.120978	-1.181582
1	-1.286727	-0.576989	-0.509679
1	-0.338854	-1.487400	0.672872
8	0.079882	0.515039	0.535145
6	1.144067	-0.205269	-2.089448
6	0.802490	1.203670	-2.127304
1	1.886394	-0.539599	-2.817684
6	1.164726	-2.507768	-1.199112
6	0.344765	-3.560988	-0.752568
6	2.469066	-2.826414	-1.625002
6	0.806483	-4.872463	-0.738924
1	-0.674093	-3.349795	-0.429723
6	2.930512	-4.137332	-1.603267
1	3.138361	-2.025068	-1.940528
6	2.101587	-5.168574	-1.160720
1	0.148724	-5.669869	-0.396616
1	3.949537	-4.354192	-1.921352
1	2.464537	-6.194500	-1.140117
6	0.592408	0.352127	2.273779
6	2.879678	-0.626288	1.876018
6	1.789890	-1.558659	2.368978
7	0.612664	-0.916050	2.644721
8	1.997381	-2.761787	2.493605
16	2.354407	1.045648	2.018029
6	4.016639	-1.119659	1.340906
6	5.128078	-0.421379	0.726474
6	5.938173	-1.116300	-0.192300
6	5.432503	0.927309	0.984208
6	6.966342	-0.481740	-0.876177
1	5.734016	-2.168392	-0.389074
6	6.475294	1.568851	0.330100
1	4.877440	1.486017	1.735587
6	7.213229	0.864663	-0.616281
1	7.562993	-1.021139	-1.607966
1	6.707604	2.606786	0.552640
1	4.055185	-2.211555	1.324715
6	-0.335786	1.327574	2.886768
6	-0.338455	2.668825	2.480945
6	-1.221985	0.912821	3.885077
6	-1.215815	3.577457	3.060343
1	0.341481	2.995616	1.688661
6	-2.099633	1.825485	4.464912
1	-1.212394	-0.128370	4.199856
6	-2.099648	3.157219	4.055640
1	-1.211454	4.616324	2.735611
1	-2.784343	1.492901	5.243163
1	-2.785822	3.869131	4.510895
17	8.466972	1.701789	-1.503891
1	-0.225828	1.474461	-1.860059
1	1.145160	1.731749	-3.019749

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46	1.398730	2.175262	0.132704
15	2.494757	3.916897	-0.782056
6	3.389818	5.026761	0.367272
6	3.744013	6.327963	-0.021335
6	3.751147	4.579181	1.642850
6	4.470471	7.145865	0.838729
1	3.446110	6.705124	-0.999203
6	4.478974	5.399461	2.502117
1	3.454955	3.582730	1.968833
6	4.844050	6.681876	2.099042
1	4.742156	8.151605	0.523132
1	4.754174	5.035243	3.490221
1	5.411502	7.324168	2.769997
6	3.738850	3.344361	-1.992409
6	4.719072	4.197234	-2.516772
6	3.707755	2.005702	-2.401491
6	5.653818	3.712710	-3.427003
1	4.759843	5.241531	-2.209347
6	4.642915	1.523095	-3.314338
1	2.956624	1.335173	-1.978732
6	5.619302	2.375654	-3.824427
1	6.419068	4.379543	-3.820789
1	4.616168	0.476136	-3.612800
1	6.360957	1.997623	-4.526337
6	1.447625	5.089504	-1.715943
6	0.524145	5.868351	-1.002471
6	1.478212	5.174330	-3.111424

6	-0.335751	6.729837	-1.674168
1	0.481666	5.798682	0.085425
6	0.609733	6.035388	-3.781755
1	2.182085	4.569732	-3.682033
6	-0.294753	6.815242	-3.066707
1	-1.042704	7.335092	-1.109347
1	0.645306	6.095403	-4.868022
1	-0.970523	7.488047	-3.591508
6	-0.799904	-0.050337	0.402492
6	-0.199294	-0.223554	-0.965068
1	-1.735694	0.519930	0.361245
1	-0.986539	-0.999937	0.906401
8	0.067002	0.753794	1.254655
6	0.072608	0.897028	-1.704470
6	-0.129146	2.263202	-1.272524
1	0.558376	0.764894	-2.673222
6	0.149311	-1.564389	-1.441648
6	-0.574647	-2.697272	-1.026246
6	1.232021	-1.765788	-2.321499
6	-0.240640	-3.968857	-1.478944
1	-1.428798	-2.581392	-0.360731
6	1.568043	-3.037695	-2.766410
1	1.838469	-0.915526	-2.632307
6	0.832426	-4.147825	-2.349561
1	-0.825135	-4.826235	-1.149549
1	2.418730	-3.165564	-3.434140
1	1.099311	-5.144786	-2.695594
6	0.865988	0.046132	2.291053
6	3.194488	-0.451607	1.197229
6	2.213555	-1.611953	1.417228
7	1.089680	-1.259763	2.073463
8	2.519897	-2.745195	1.043384
16	2.657344	1.018043	1.976441
6	4.335253	-0.685397	0.508123
6	5.439052	0.174656	0.131339
6	6.498710	-0.403637	-0.596842
6	5.523356	1.551834	0.413416
6	7.584103	0.343267	-1.030639
1	6.458288	-1.466712	-0.831607
6	6.603193	2.315170	-0.009947
1	4.723662	2.053640	0.954123
6	7.624604	1.702950	-0.731177
1	8.388040	-0.121736	-1.595228
1	6.643584	3.381151	0.205881
1	4.422077	-1.724633	0.181252
6	0.372652	0.477353	3.637876
6	0.433809	-0.408017	4.716632
6	-0.105384	1.777441	3.845180
6	0.012556	-0.004563	5.981320
1	0.806740	-1.416645	4.549330
6	-0.522350	2.179242	5.109914
1	-0.148319	2.473670	3.007672
6	-0.466334	1.288458	6.182049
1	0.057245	-0.705509	6.813303
1	-0.894401	3.191586	5.259416
1	-0.795554	1.602765	7.171048
17	8.977949	2.665280	-1.281358
1	-0.982303	2.461061	-0.610311
1	-0.036836	3.017426	-2.055355

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46	-1.790983	0.044354	-0.482018
15	-1.261452	-2.124084	0.201715
6	0.468434	-2.528384	-0.232919
6	1.275462	-3.379225	0.528848
6	1.004309	-1.928073	-1.381280
6	2.589964	-3.631344	0.142991
1	0.887912	-3.832629	1.439995
6	2.316031	-2.189580	-1.770784
1	0.389090	-1.237493	-1.963220
6	3.112000	-3.042176	-1.008017
1	3.211811	-4.286614	0.750859
1	2.720535	-1.710271	-2.661263
1	4.143109	-3.235018	-1.300403
6	-1.543383	-2.593638	1.939143
6	-1.574403	-3.936017	2.342615
6	-1.764754	-1.587888	2.887669
6	-1.801199	-4.263485	3.676391
1	-1.425738	-4.728227	1.608791
6	-1.998423	-1.918740	4.220172
1	-1.729419	-0.543861	2.574975
6	-2.011812	-3.255225	4.616239
1	-1.815560	-5.308321	3.980879
1	-2.167726	-1.130619	4.951694
1	-2.192871	-3.512344	5.658555
6	-2.240963	-3.365308	-0.729605
6	-1.797445	-3.855775	-1.963433
6	-3.516755	-3.731145	-0.275892

6	-2.606888	-4.698593	-2.722805
1	-0.811476	-3.582886	-2.337919
6	-4.320606	-4.578179	-1.033562
1	-3.885679	-3.348723	0.676185
6	-3.868579	-5.063788	-2.260571
1	-2.243362	-5.074506	-3.677668
1	-5.305328	-4.859430	-0.663583
1	-4.498746	-5.724995	-2.852506
6	-1.455048	2.585747	-2.240992
6	-2.553520	1.857976	-1.483480
1	-1.561635	2.429061	-3.319580
1	-1.488258	3.664077	-2.050285
8	-0.127627	2.093439	-1.977639
6	-3.005413	0.644517	-2.084025
6	-3.708489	-0.338027	-1.353753
1	-2.546935	0.361767	-3.035274
6	-3.375520	2.655607	-0.525946
6	-3.750850	3.960730	-0.889751
6	-3.802546	2.180527	0.725107
6	-4.524069	4.751511	-0.045600
1	-3.450861	4.358870	-1.858076
6	-4.571310	2.974624	1.573055
1	-3.496945	1.187228	1.057752
6	-4.937774	4.263525	1.192253
1	-4.803591	5.756034	-0.359622
1	-4.877127	2.582742	2.541878
1	-5.536998	4.884023	1.856077
6	0.340304	2.176349	-0.635166
6	2.331328	0.892255	0.428516
6	0.953367	0.477515	0.873530
7	-0.030228	1.051458	0.145868
8	0.786266	-0.357480	1.771125
16	2.237040	2.092093	-0.829426
6	3.409787	0.231217	0.912636
6	4.803487	0.286947	0.527464
6	5.664791	-0.716853	1.017090
6	5.360921	1.257212	-0.328131
6	7.004417	-0.770661	0.662939
1	5.259791	-1.479219	1.682425
6	6.701168	1.219646	-0.691666
1	4.753457	2.077763	-0.703852
6	7.510566	0.201703	-0.196809
1	7.649075	-1.557807	1.046022
1	7.112980	1.978142	-1.352588
1	3.155891	-0.514639	1.668628
6	-0.000974	3.511198	0.009868
6	0.273188	4.705298	-0.669795
6	-0.595353	3.573661	1.271033
6	-0.048119	5.933003	-0.103798
1	0.737964	4.665282	-1.655730
6	-0.916247	4.806190	1.841201
1	-0.816245	2.649088	1.802118
6	-0.647418	5.987507	1.156523
1	0.168871	6.851421	-0.646822
1	-1.388500	4.837166	2.822294
1	-0.900886	6.948851	1.600392
17	9.198972	0.143981	-0.658663
1	-4.423596	-0.063462	-0.575776
1	-3.891525	-1.300300	-1.831504

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6	1.255331	0.142638	0.108058
6	-0.635828	-1.058102	-1.287815
6	0.603651	-1.820568	-0.925247
7	1.559743	-1.143965	-0.327154
8	0.680559	-3.069600	-1.167402
16	-0.548193	0.549997	-0.628650
6	-1.611021	-1.653437	-2.020633
6	-2.888675	-1.150396	-2.480014
6	-3.661964	-1.967690	-3.330734
6	-3.427078	0.102074	-2.124844
6	-4.899630	-1.564535	-3.810722
1	-3.273360	-2.943435	-3.620982
6	-4.665680	0.520027	-2.592852
1	-2.883606	0.766476	-1.457348
6	-5.392054	-0.317778	-3.433679
1	-5.477826	-2.210309	-4.466796
1	-5.065230	1.488233	-2.301500
1	-1.380583	-2.680639	-2.308797
17	-6.959111	0.201332	-4.018438
6	1.853054	-1.981800	2.281508
6	1.468130	-3.287363	2.561871
1	0.401361	-3.467949	2.716514
6	2.352201	-4.418853	2.448480
1	3.415035	-4.281032	2.658163
1	1.969258	-5.391260	2.763902
6	2.199610	1.212975	-0.383714
6	2.494775	2.345216	0.379898

6	2.793826	1.062738	-1.640748
6	3.376748	3.308300	-0.107394
1	2.042578	2.465140	1.361901
6	3.674746	2.023958	-2.124644
1	2.562082	0.179598	-2.235656
6	3.970212	3.151192	-1.358272
1	3.604466	4.184105	0.498184
1	4.135012	1.890875	-3.102551
1	4.661881	3.903036	-1.734467
6	3.249934	-1.489690	2.293449
6	4.304564	-2.087726	1.585793
6	3.539025	-0.337128	3.046592
6	5.592714	-1.564950	1.631969
1	4.105345	-2.951944	0.952587
6	4.830111	0.175600	3.106761
1	2.742646	0.160236	3.596575
6	5.864641	-0.433021	2.397623
1	6.383094	-2.046489	1.056349
1	5.026236	1.063623	3.705237
1	6.871984	-0.022209	2.435295
8	1.175203	0.252206	1.512758
6	0.777064	-0.917402	2.206386
1	-0.149229	-1.339019	1.786635
1	0.536734	-0.562309	3.217962
46	1.873144	-3.929740	0.505926
15	3.017688	-5.515663	-0.641419
6	4.412531	-4.665659	-1.471588
6	5.661060	-5.270772	-1.665468
6	4.213049	-3.351115	-1.919880
6	6.690354	-4.571624	-2.292586
1	5.833161	-6.290543	-1.322689
6	5.242745	-2.657934	-2.549946
1	3.247922	-2.867175	-1.752688
6	6.484505	-3.266172	-2.733610
1	7.657327	-5.050963	-2.435268
1	5.078472	-1.635521	-2.887317
1	7.292426	-2.721108	-3.218286
6	3.813367	-6.833862	0.335212
6	3.445860	-8.179041	0.225312
6	4.785332	-6.465279	1.278946
6	4.044623	-9.139140	1.040686
1	2.693702	-8.483275	-0.501659
6	5.386360	-7.426760	2.082995
1	5.078420	-5.418153	1.374670
6	5.015262	-8.767188	1.966728
1	3.752024	-10.183307	0.944524
1	6.145972	-7.129116	2.803748
1	5.483766	-9.519297	2.598969
6	2.119956	-6.377228	-1.974131
6	2.796220	-7.006070	-3.028370
6	0.721553	-6.415037	-1.932915
6	2.080602	-7.663579	-4.024049
1	3.885572	-6.981664	-3.069254
6	0.008185	-7.078335	-2.929199
1	0.197170	-5.910955	-1.120258
6	0.686876	-7.700634	-3.974972
1	2.611803	-8.148687	-4.840921
1	-1.079359	-7.102613	-2.891219
1	0.130000	-8.213143	-4.757330

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6	1.021131	0.308002	0.494318
6	-0.715543	-1.084437	-0.896204
6	0.458535	-1.826103	-0.352504
7	1.336524	-1.069142	0.323119
8	0.586842	-3.059928	-0.546551
16	-0.733259	0.555308	-0.300184
6	-1.569647	-1.717192	-1.737814
6	-2.760334	-1.260825	-2.419485
6	-3.367151	-2.151493	-3.328876
6	-3.356022	0.004797	-2.253238
6	-4.499472	-1.805645	-4.048944
1	-2.927217	-3.137618	-3.471830
6	-4.492791	0.366713	-2.964573
1	-2.937911	0.726675	-1.555283
6	-5.052816	-0.541538	-3.859153
1	-4.947929	-2.505453	-4.749059
1	-4.940617	1.347186	-2.824287
1	-1.287682	-2.750541	-1.945266
17	-6.483177	-0.091786	-4.761460
6	2.019312	-1.521874	2.108437
6	1.871097	-2.913911	2.441463
1	0.881866	-3.211056	2.798835
6	2.957278	-3.843123	2.552337
1	3.982597	-3.471653	2.611874
1	2.785834	-4.745235	3.143606
6	2.007379	1.228864	-0.195234
6	2.610111	2.292551	0.477485

6	2.366993	0.963180	-1.520983
6	3.575118	3.068756	-0.164531
1	2.342080	2.497480	1.510970
6	3.330009	1.736060	-2.157294
1	1.895506	0.134918	-2.051293
6	3.942095	2.791022	-1.478015
1	4.047438	3.889651	0.372553
1	3.606512	1.515351	-3.186843
1	4.701728	3.392639	-1.974079
6	3.398980	-0.955553	1.981761
6	4.211313	-1.280445	0.888661
6	3.909100	-0.105368	2.968406
6	5.505812	-0.783724	0.786151
1	3.797541	-1.913687	0.101760
6	5.205860	0.396874	2.864827
1	3.297712	0.170962	3.826139
6	6.008672	0.059164	1.777589
1	6.118060	-1.048861	-0.075547
1	5.585940	1.060761	3.639390
1	7.018323	0.458463	1.698166
8	0.975521	0.609181	1.862664
6	0.965269	-0.582246	2.632923
1	-0.021431	-1.069960	2.618753
1	1.176267	-0.273599	3.662862
46	2.287602	-3.975203	0.603596
15	3.613634	-5.281344	-0.678861
6	4.665003	-4.231776	-1.758708
6	6.005589	-4.508838	-2.050971
6	4.070919	-3.090050	-2.318871
6	6.736723	-3.659783	-2.880456
1	6.483869	-5.392330	-1.629087
6	4.798663	-2.249849	-3.156325
1	3.028562	-2.860417	-2.082245
6	6.136594	-2.531252	-3.434876
1	7.779483	-3.886051	-3.097071
1	4.323421	-1.370612	-3.588202
1	6.710644	-1.869985	-4.081616
6	4.820532	-6.364947	0.169593
6	4.813418	-7.760100	0.067979
6	5.746232	-5.753366	1.030510
6	5.716847	-8.525974	0.805559
1	4.101350	-8.256062	-0.590499
6	6.654331	-6.517503	1.754292
1	5.756711	-4.665438	1.124527
6	6.639808	-7.909196	1.645169
1	5.698348	-9.610988	0.716744
1	7.372386	-6.027238	2.409643
1	7.345963	-8.509074	2.216641
6	2.770401	-6.382564	-1.875940
6	3.450138	-7.019664	-2.923541
6	1.390032	-6.570672	-1.743817
6	2.760045	-7.836856	-3.813615
1	4.525477	-6.877676	-3.038967
6	0.699305	-7.389771	-2.635331
1	0.861998	-6.060251	-0.935726
6	1.384279	-8.023406	-3.669683
1	3.295605	-8.329590	-4.623256
1	-0.374621	-7.529027	-2.523965
1	0.846359	-8.661277	-4.369036

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6	0.519165	0.488461	0.945165
6	-1.341116	-1.309552	0.506423
6	-0.110545	-1.486518	-0.303357
7	0.868327	-0.593011	0.036474
8	-0.001682	-2.357783	-1.177131
16	-1.141915	-0.053905	1.709790
6	-2.388929	-2.145323	0.297131
6	-3.645702	-2.296742	0.993557
6	-4.506923	-3.329102	0.567660
6	-4.064088	-1.506800	2.082345
6	-5.717203	-3.576973	1.195898
1	-4.208276	-3.952079	-0.274416
6	-5.272290	-1.742422	2.723135
1	-3.449627	-0.686912	2.446175
6	-6.087258	-2.779307	2.276457
1	-6.364845	-4.380706	0.855497
1	-5.576935	-1.126820	3.565301
1	-2.226764	-2.846224	-0.523124
17	-7.604197	-3.085910	3.087566
6	2.343373	-0.876264	0.218759
6	2.707251	-2.307858	-0.077100
1	2.231403	-3.032802	0.590205
6	3.856208	-2.695365	-0.793039
1	4.588526	-1.962145	-1.133525
1	4.259541	-3.695677	-0.630807
6	0.358344	1.819244	0.236215
6	1.134415	2.920701	0.596883

6	-0.516879	1.918049	-0.850543
6	1.037279	4.109869	-0.125149
1	1.830492	2.838763	1.427750
6	-0.600515	3.099307	-1.576957
1	-1.124982	1.060041	-1.142410
6	0.177255	4.200602	-1.215268
1	1.646864	4.964172	0.163416
1	-1.277187	3.163139	-2.427118
1	0.109515	5.126239	-1.783962
6	3.135817	0.135936	-0.599257
6	4.374500	0.610002	-0.164315
6	2.650384	0.564228	-1.839090
6	5.103248	1.508960	-0.943329
1	4.788144	0.276361	0.786507
6	3.373142	1.462962	-2.618682
1	1.684841	0.194724	-2.185977
6	4.604365	1.941944	-2.169222
1	6.064137	1.873546	-0.584188
1	2.969259	1.789772	-3.576547
1	5.170757	2.649977	-2.771914
8	1.534206	0.560194	1.889685
6	2.368094	-0.589919	1.726193
1	1.952275	-1.446922	2.276186
1	3.351196	-0.340937	2.130680
46	2.153725	-2.715807	-2.083526
15	2.351349	-2.834782	-4.340466
6	1.663804	-1.306105	-5.103463
6	2.218968	-0.697378	-6.235980
6	0.540214	-0.717722	-4.504120
6	1.663383	0.469023	-6.758355
1	3.091184	-1.139493	-6.718002
6	-0.019877	0.444180	-5.030320
1	0.115155	-1.173432	-3.605716
6	0.542985	1.040943	-6.158541
1	2.107265	0.930469	-7.639270
1	-0.894192	0.887372	-4.555298
1	0.111570	1.953619	-6.566369
6	4.066290	-2.832552	-5.008712
6	4.486278	-3.620917	-6.085353
6	4.993059	-1.971628	-4.400780
6	5.801775	-3.548885	-6.544350
1	3.784033	-4.293544	-6.577022
6	6.299473	-1.886584	-4.870650
1	4.679779	-1.361603	-3.549560
6	6.708676	-2.679684	-5.943872
1	6.113668	-4.171346	-7.381651
1	7.002339	-1.204756	-4.394055
1	7.733489	-2.621549	-6.306653
6	1.542955	-4.180185	-5.294564
6	0.969868	-3.992692	-6.558833
6	1.498734	-5.456486	-4.715678
6	0.365633	-5.056169	-7.226340
1	0.996225	-3.009308	-7.028333
6	0.904923	-6.521632	-5.387961
1	1.932720	-5.609859	-3.725898
6	0.333164	-6.321833	-6.644011
1	-0.079917	-4.894841	-8.206747
1	0.880155	-7.507299	-4.925858
1	-0.141562	-7.150882	-7.165883

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6	0.460341	0.787499	0.055948
6	0.465849	-1.297398	-1.548287
6	1.731251	-0.990287	-0.742656
7	1.671155	0.138797	-0.026487
8	2.700082	-1.765967	-0.794199
16	-0.744795	-0.087531	-1.294612
6	0.449034	-2.401826	-2.336770
6	-0.567982	-2.929818	-3.221906
6	-0.274865	-4.105326	-3.945493
6	-1.835947	-2.349546	-3.427801
6	-1.180484	-4.671482	-4.831047
1	0.696836	-4.579046	-3.807552
6	-2.755387	-2.902532	-4.309898
1	-2.116683	-1.445344	-2.892621
6	-2.418892	-4.058844	-5.007005
1	-0.928952	-5.575316	-5.380899
1	-3.726129	-2.435059	-4.456263
1	1.380497	-2.970807	-2.295315
17	-3.573913	-4.752015	-6.130556
6	1.228191	-1.059439	2.372841
6	1.694958	-2.350285	2.059522
1	1.104509	-2.941891	1.358754
6	2.646485	-3.012984	2.883371
1	3.490016	-2.487217	3.329814
1	2.813181	-4.077531	2.716473
6	0.453098	2.259899	-0.266383
6	-0.652146	3.055611	0.055376

6	1.542429	2.840751	-0.918408
6	-0.663084	4.409457	-0.266881
1	-1.506500	2.606377	0.558699
6	1.531550	4.196293	-1.239112
1	2.399707	2.217095	-1.165277
6	0.430003	4.985586	-0.913743
1	-1.529428	5.017711	-0.011241
1	2.389605	4.638442	-1.743453
1	0.421577	6.044879	-1.165045
6	1.997336	-0.073745	3.154424
6	3.383184	0.083124	2.986627
6	1.335127	0.736614	4.095538
6	4.087045	1.001638	3.756759
1	3.894514	-0.499236	2.221058
6	2.045400	1.649062	4.869243
1	0.256991	0.641637	4.224596
6	3.423334	1.782314	4.704866
1	5.158557	1.120714	3.606127
1	1.518499	2.264103	5.596626
1	3.977933	2.502913	5.303313
8	-0.187781	0.656028	1.321161
6	-0.133880	-0.647604	1.860724
1	-0.497070	-1.391001	1.132588
1	-0.855840	-0.632170	2.689682
46	1.051584	-2.465749	4.127594
15	1.292559	-3.677505	6.072987
6	-0.320665	-3.918431	6.886947
6	-0.637399	-5.048351	7.649186
6	-1.277258	-2.906098	6.723185
6	-1.891134	-5.156571	8.247552
1	0.098839	-5.842067	7.776791
6	-2.526707	-3.015349	7.326218
1	-1.034384	-2.028873	6.117276
6	-2.834382	-4.142811	8.087654
1	-2.131632	-6.037103	8.840357
1	-3.264197	-2.225874	7.194463
1	-3.813562	-4.233000	8.554171
6	2.020769	-5.343446	5.953530
6	2.961894	-5.830669	6.867013
6	1.604525	-6.161288	4.892912
6	3.476196	-7.117961	6.720849
1	3.296032	-5.206818	7.695504
6	2.113828	-7.448311	4.755804
1	0.880605	-5.779957	4.170482
6	3.053409	-7.927310	5.668932
1	4.210129	-7.488177	7.434295
1	1.784816	-8.075049	3.928901
1	3.459681	-8.930806	5.556442
6	2.306007	-2.768591	7.287708
6	2.122594	-2.908392	8.669323
6	3.294910	-1.897597	6.809777
6	2.921940	-2.192086	9.556096
1	1.353939	-3.580958	9.050806
6	4.093997	-1.184760	7.699440
1	3.427641	-1.777226	5.732300
6	3.907185	-1.331309	9.073233
1	2.773774	-2.305456	10.628453
1	4.855930	-0.507047	7.317814
1	4.526413	-0.769010	9.769807

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6	-0.030293	0.460291	0.107380
6	0.276341	-1.219466	-1.908152
6	1.459585	-1.014680	-0.990322
7	1.223759	-0.157812	0.037222
8	2.525404	-1.613705	-1.154418
16	-1.114189	-0.340746	-1.349944
6	0.427886	-2.036877	-2.979495
6	-0.498472	-2.460491	-4.006117
6	-0.025156	-3.357232	-4.986407
6	-1.841886	-2.046807	-4.102495
6	-0.837022	-3.823590	-6.008950
1	1.010167	-3.692515	-4.936135
6	-2.668796	-2.502802	-5.120822
1	-2.257563	-1.352045	-3.376134
6	-2.158931	-3.388855	-6.065883
1	-0.451124	-4.515806	-6.752875
1	-3.702497	-2.171428	-5.179992
1	1.436698	-2.446198	-3.063906
17	-3.198347	-3.965137	-7.351355
6	1.308320	-1.112497	1.842912
6	1.886619	-2.403913	1.649663
1	1.278830	-3.127172	1.103465
6	3.157249	-2.805022	2.126218
1	3.939623	-2.077648	2.345531
1	3.527682	-3.788132	1.832420
6	-0.050635	1.953096	-0.103128
6	-1.181281	2.696448	0.252076

6	1.048796	2.603210	-0.665861
6	-1.207526	4.072376	0.048851
1	-2.041629	2.192182	0.689848
6	1.019184	3.981229	-0.869831
1	1.930122	2.022745	-0.933442
6	-0.107123	4.719530	-0.513778
1	-2.091267	4.642599	0.330381
1	1.883068	4.479149	-1.307435
1	-0.129059	5.796243	-0.673419
6	2.040401	-0.070980	2.619391
6	3.276166	0.409647	2.166288
6	1.521663	0.428155	3.822852
6	3.984520	1.350339	2.905888
1	3.660088	0.050960	1.212050
6	2.233703	1.370164	4.563399
1	0.559257	0.074765	4.192880
6	3.466992	1.833127	4.108605
1	4.940171	1.717986	2.535877
1	1.817780	1.745097	5.497058
1	4.019299	2.574260	4.684057
8	-0.644625	0.192362	1.341901
6	-0.200880	-1.058229	1.833089
1	-0.596052	-1.884965	1.219816
1	-0.625292	-1.149939	2.839301
46	1.896689	-2.807935	3.793567
15	2.826896	-3.636727	5.713232
6	1.611080	-3.975425	7.038048
6	1.465000	-5.219030	7.661750
6	0.752445	-2.924846	7.398853
6	0.481057	-5.405527	8.632805
1	2.122553	-6.045617	7.393551
6	-0.219866	-3.111029	8.375372
1	0.855271	-1.952528	6.911503
6	-0.359432	-4.355031	8.992648
1	0.376000	-6.377644	9.111619
1	-0.874426	-2.286018	8.651305
1	-1.125062	-4.503828	9.751770
6	3.729527	-5.210798	5.496626
6	4.805808	-5.592323	6.306627
6	3.305406	-6.069283	4.473750
6	5.444976	-6.811701	6.093852
1	5.148465	-4.933482	7.104708
6	3.938230	-7.292358	4.269833
1	2.475284	-5.763641	3.832939
6	5.012423	-7.662490	5.077702
1	6.285741	-7.096899	6.723856
1	3.599662	-7.951509	3.472297
1	5.516410	-8.613244	4.912572
6	4.019430	-2.508345	6.519494
6	4.243836	-2.508434	7.902730
6	4.723481	-1.602928	5.714316
6	5.158242	-1.620912	8.465194
1	3.698551	-3.202744	8.542496
6	5.641178	-0.720259	6.278239
1	4.534895	-1.588655	4.638605
6	5.857693	-0.727228	7.655134
1	5.324040	-1.627275	9.541212
1	6.178500	-0.018688	5.641808
1	6.567860	-0.031633	8.098482

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6	-3.070801	1.793422	0.888020
6	-4.528068	-0.006100	-0.352220
6	-3.262899	0.365531	-1.055183
7	-2.476296	1.214840	-0.291736
8	-2.946841	-0.047400	-2.161430
16	-4.593558	0.654893	1.263755
6	-5.388149	-0.842858	-0.983052
6	-6.610853	-1.475225	-0.543468
6	-7.240020	-2.363140	-1.440324
6	-7.211058	-1.289349	0.717545
6	-8.400610	-3.041738	-1.105430
1	-6.795158	-2.522904	-2.421572
6	-8.374826	-1.960048	1.068730
1	-6.774867	-0.608617	1.444919
6	-8.957844	-2.833743	0.154330
1	-8.866708	-3.726469	-1.808983
1	-8.824266	-1.806685	2.046473
1	-5.067531	-1.103722	-1.993410
17	10.418396	-3.688752	0.593300
6	-1.007762	0.955545	-0.006415
6	-0.495644	-0.316694	-0.629563
1	-1.019082	-1.212992	-0.284609
6	0.231153	-0.387109	-1.822243
1	0.443494	0.508171	-2.409972
1	0.243358	-1.319943	-2.387430
6	-3.583133	3.204275	0.737791
6	-3.626801	4.046184	1.852198

6	-4.052732	3.666479	-0.494185
6	-4.132661	5.337499	1.732825
1	-3.261660	3.688645	2.812481
6	-4.557177	4.958645	-0.609095
1	-4.020914	3.018799	-1.369174
6	-4.599420	5.797672	0.502960
1	-4.158374	5.987294	2.605722
1	-4.915556	5.311536	-1.574385
1	-4.993718	6.808013	0.410319
6	-0.192645	2.178303	-0.402183
6	-0.526349	2.906042	-1.546033
6	0.960191	2.534762	0.308043
6	0.273219	3.966399	-1.974035
1	-1.418131	2.629505	-2.108912
6	1.754639	3.599626	-0.110435
1	1.253183	1.973317	1.195128
6	1.414527	4.317744	-1.256188
1	-0.001143	4.520065	-2.870536
1	2.647531	3.860949	0.456791
1	2.038651	5.145920	-1.588565
8	-2.124742	1.737858	1.898278
6	-1.152033	0.770363	1.508302
1	-1.515857	-0.245914	1.726089
1	-0.249529	0.962364	2.091446
46	1.622545	-0.509432	-0.235869
15	3.899752	-0.671977	-0.406488
6	4.812422	-0.789372	1.181603
6	5.660287	-1.853520	1.507694
6	4.605601	0.226536	2.128604
6	6.291604	-1.898376	2.750512
1	5.837381	-2.651392	0.787377
6	5.246428	0.186559	3.362312
1	3.944833	1.062023	1.886787
6	6.089489	-0.880110	3.678158
1	6.948779	-2.732928	2.989900
1	5.083914	0.986678	4.082661
1	6.586064	-0.915097	4.646283
6	4.497745	-2.126676	-1.346372
6	5.703685	-2.145334	-2.057239
6	3.702873	-3.280556	-1.325170
6	6.103320	-3.296457	-2.733061
1	6.334986	-1.257063	-2.083615
6	4.109553	-4.434851	-1.989041
1	2.754527	-3.260004	-0.782952
6	5.309744	-4.442319	-2.698022
1	7.039462	-3.298020	-3.289178
1	3.483567	-5.325101	-1.962304
1	5.624213	-5.339211	-3.228992
6	4.717888	0.753232	-1.223986
6	6.016161	1.168598	-0.899580
6	4.012542	1.448012	-2.216455
6	6.595285	2.253049	-1.554017
1	6.578877	0.639535	-0.130278
6	4.595461	2.527360	-2.875958
1	2.991859	1.143352	-2.459431
6	5.887102	2.933188	-2.543844
1	7.604406	2.566158	-1.290928
1	4.033185	3.060165	-3.641572
1	6.340525	3.781995	-3.052953

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6	1.925864	2.506956	-0.407495
6	2.863459	0.063018	-0.091852
6	1.372109	0.245484	-0.032277
7	0.951468	1.513685	-0.195077
8	0.586374	-0.716778	0.128676
16	3.642764	1.557790	-0.516841
6	3.392524	-1.159639	0.165316
6	4.756837	-1.638827	0.157434
6	4.964973	-3.015646	0.385365
6	5.895869	-0.839834	-0.066458
6	6.231747	-3.578440	0.379011
1	4.101407	-3.655067	0.566646
6	7.172854	-1.386008	-0.067555
1	5.795225	0.229837	-0.237297
6	7.328945	-2.752654	0.145882
1	6.368107	-4.643372	0.548315
1	8.040289	-0.755704	-0.248068
1	2.638749	-1.914296	0.400166
17	8.933645	-3.448486	0.099417
6	-0.298638	1.830482	-1.731937
6	-0.914902	0.633226	-2.242911
1	-1.861746	0.349893	-1.783263
6	-0.613171	0.063628	-3.517333
6	2.051481	3.562857	0.662806
6	3.002839	4.576895	0.511030
6	1.207944	3.571066	1.773777
6	3.115035	5.582877	1.463015

1	3.660411	4.574971	-0.358414
6	1.321629	4.582812	2.727703
1	0.458061	2.788733	1.880883
6	2.273893	5.587224	2.576906
1	3.861104	6.365491	1.337444
1	0.659881	4.582980	3.592283
1	2.363213	6.372948	3.325069
6	-1.184984	2.792456	-1.027963
6	-2.095221	2.336496	-0.060689
6	-1.137303	4.163869	-1.309846
6	-2.924902	3.225715	0.608311
1	-2.124274	1.277068	0.192532
6	-1.980862	5.052396	-0.646653
1	-0.439297	4.547439	-2.049996
6	-2.872709	4.590221	0.316693
1	-3.613323	2.853996	1.365294
1	-1.932907	6.113705	-0.883542
1	-3.523649	5.287258	0.841463
8	1.676522	3.180949	-1.615807
6	0.898201	2.367443	-2.475931
1	1.500223	1.525770	-2.857250
1	0.611570	3.005721	-3.319395
46	0.491509	-1.111917	-2.238667
15	1.712533	-2.609855	-3.408177
6	1.658484	-4.312803	-2.736775
6	1.901569	-5.453840	-3.511651
6	1.382567	-4.460392	-1.371168
6	1.881183	-6.717458	-2.925615
1	2.113756	-5.351572	-4.576495
6	1.368074	-5.723684	-0.785397
1	1.170660	-3.571345	-0.771513
6	1.618753	-6.853427	-1.562888
1	2.074852	-7.598757	-3.534755
1	1.154240	-5.826228	0.277271
1	1.603174	-7.842296	-1.107754
6	1.303922	-2.837792	-5.181424
6	2.274076	-2.978470	-6.180981
6	-0.050876	-2.864036	-5.541584
6	1.895196	-3.139996	-7.512678
1	3.332176	-2.963869	-5.920532
6	-0.427794	-3.033568	-6.870300
1	-0.811890	-2.744797	-4.768334
6	0.546373	-3.167713	-7.859895
1	2.659424	-3.245660	-8.280866
1	-1.483489	-3.051997	-7.135517
1	0.253214	-3.289444	-8.901289
6	3.497195	-2.197457	-3.433093
6	4.511032	-3.159951	-3.349565
6	3.853030	-0.844460	-3.542454
6	5.850870	-2.777378	-3.385223
1	4.255780	-4.215522	-3.257731
6	5.191110	-0.465295	-3.590649
1	3.066867	-0.085748	-3.578319
6	6.193029	-1.432505	-3.509689
1	6.630183	-3.534838	-3.309402
1	5.451879	0.589034	-3.670481
1	7.240530	-1.136238	-3.529208
1	0.041506	0.578041	-4.225304
1	-1.410399	-0.501078	-4.005377

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6	-2.998913	0.925892	-0.734305
6	-0.689067	1.685794	0.262724
6	-1.272523	0.477576	0.908694
7	-2.448082	0.080379	0.299861
8	-0.776560	-0.089134	1.885049
16	-1.587217	2.144948	-1.164642
6	0.444441	2.220849	0.783874
6	1.274673	3.315812	0.336834
6	2.462336	3.582626	1.050533
6	0.983732	4.135644	-0.770749
6	3.322723	4.605119	0.680329
1	2.709628	2.966431	1.914599
6	1.833144	5.163273	-1.154274
1	0.075283	3.989861	-1.349403
6	2.998198	5.387511	-0.426251
1	4.234422	4.794017	1.241498
1	1.591758	5.783852	-2.013225
1	0.787606	1.711929	1.686910
17	4.077539	6.671954	-0.914712
6	-2.787629	-1.346125	-0.064305
6	-1.805722	-2.367935	0.460334
1	-1.871723	-2.560096	1.532318
6	-1.218375	-3.340720	-0.356328
6	-4.220107	1.723337	-0.344859
6	-5.081351	2.183775	-1.345364
6	-4.497972	2.011305	0.992554
6	-6.212406	2.919942	-1.008128

1	-4.867888	1.956905	-2.388215
6	-5.634909	2.744700	1.325717
1	-3.832159	1.648454	1.774391
6	-6.494030	3.200613	0.328519
1	-6.879442	3.271944	-1.793079
1	-5.850130	2.956194	2.371559
1	-7.381588	3.773161	0.591280
6	-4.191355	-1.618011	0.472093
6	-4.386191	-1.541492	1.857361
6	-5.286179	-1.900733	-0.346030
6	-5.642101	-1.752862	2.413289
1	-3.541894	-1.291726	2.501452
6	-6.548719	-2.109533	0.211255
1	-5.172852	-1.942545	-1.427446
6	-6.731012	-2.038507	1.588834
1	-5.774161	-1.686753	3.491872
1	-7.393408	-2.322738	-0.441627
1	-7.717440	-2.198330	2.020261
8	-3.318607	0.100082	-1.812233
6	-2.709771	-1.167628	-1.580421
1	-1.652868	-1.152766	-1.895230
1	-3.254469	-1.907005	-2.171584
46	0.227276	-1.800713	0.079525
15	2.395019	-1.442156	-0.554061
6	3.504975	-1.110808	0.866880
6	4.877023	-1.388970	0.871670
6	2.920805	-0.544366	2.008548
6	5.649298	-1.098265	1.994844
1	5.344681	-1.835654	-0.006532
6	3.695426	-0.243139	3.125860
1	1.843938	-0.351664	2.013817
6	5.061529	-0.522877	3.120638
1	6.714614	-1.323168	1.990336
1	3.229912	0.199806	4.005265
1	5.666936	-0.298330	3.997103
6	3.273106	-2.768593	-1.469594
6	4.233198	-2.517055	-2.457588
6	2.961474	-4.097221	-1.149237
6	4.869181	-3.573692	-3.107552
1	4.488331	-1.490327	-2.720867
6	3.605343	-5.151461	-1.790884
1	2.200430	-4.298478	-0.392377
6	4.558821	-4.890968	-2.774798
1	5.611650	-3.365744	-3.876340
1	3.353923	-6.178226	-1.530452
1	5.055310	-5.714092	-3.285502
6	2.621165	0.023800	-1.635100
6	3.667008	0.945697	-1.502796
6	1.673455	0.216675	-2.651457
6	3.765985	2.028848	-2.375623
1	4.411220	0.817738	-0.716245
6	1.778514	1.292463	-3.527811
1	0.842021	-0.485456	-2.746403
6	2.825684	2.202963	-3.389553
1	4.582028	2.741275	-2.260792
1	1.031884	1.428939	-4.308522
1	2.902504	3.054312	-4.064152
1	-1.413267	-3.392593	-1.428390
1	-0.872157	-4.274113	0.088171

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46	-1.190250	-0.550988	-0.202860
15	-3.267764	-0.669489	0.653897
6	-4.540541	-1.675136	-0.194147
6	-4.403402	-3.071883	-0.157691
6	-5.602812	-1.118073	-0.913555
6	-5.314239	-3.890158	-0.816779
1	-3.577356	-3.520947	0.396238
6	-6.512858	-1.941099	-1.576030
1	-5.731675	-0.037319	-0.950484
6	-6.372505	-3.325489	-1.529346
1	-5.197082	-4.971611	-0.774709
1	-7.339747	-1.492971	-2.124381
1	-7.086354	-3.965315	-2.045207
6	-3.295034	-1.371872	2.342678
6	-4.500981	-1.693780	2.982639
6	-2.084247	-1.631838	2.996084
6	-4.492706	-2.252198	4.256914
1	-5.450112	-1.509423	2.477997
6	-2.078747	-2.195785	4.270439
1	-1.145758	-1.391836	2.493776
6	-3.281559	-2.502957	4.902421
1	-5.433831	-2.495738	4.747150
1	-1.131979	-2.397203	4.768809
1	-3.277119	-2.944647	5.897475
6	-3.992380	1.004785	0.774364
6	-4.523355	1.530271	1.956373

6	-3.942760	1.816871	-0.369703
6	-5.004287	2.838098	1.990818
1	-4.554124	0.925177	2.860781
6	-4.436342	3.117128	-0.336671
1	-3.500294	1.425341	-1.287452
6	-4.968098	3.631230	0.846225
1	-5.408111	3.236943	2.919778
1	-4.391237	3.735928	-1.231332
1	-5.340708	4.654060	0.877462
6	1.374369	-1.416647	-1.602357
6	0.937006	-2.776055	-1.084063
8	0.708369	-0.344041	-1.018362
6	-0.398934	-3.018844	-1.081282
6	-1.377197	-2.052296	-1.581780
1	-0.779314	-3.954034	-0.661507
6	1.921246	-3.728926	-0.570812
6	3.230529	-3.776874	-1.087562
6	1.604847	-4.612560	0.480851
6	4.171726	-4.671356	-0.585265
1	3.507211	-3.118633	-1.910875
6	2.547481	-5.500289	0.984709
1	0.610332	-4.575925	0.925769
6	3.838660	-5.536550	0.455118
1	5.174815	-4.688177	-1.010696
1	2.277091	-6.160031	1.808274
1	4.577399	-6.229657	0.853477
6	-0.031000	4.165139	0.558723
6	1.154664	2.016731	0.732959
6	-0.250622	2.021369	1.125736
7	-0.847922	3.263248	1.032283
8	-0.869515	0.999343	1.505663
16	1.605431	3.608307	0.165570
6	1.887465	0.865447	0.809943
6	3.242745	0.562063	0.426563
6	4.025617	1.361760	-0.426840
6	3.790880	-0.651402	0.884826
6	5.302231	0.971322	-0.801854
1	3.631017	2.288308	-0.838618
6	5.073149	-1.047435	0.535390
1	3.189407	-1.294252	1.526998
6	5.814726	-0.230199	-0.313369
1	5.893537	1.589330	-1.472030
1	5.486260	-1.982833	0.902952
1	1.362261	0.062349	1.326216
6	-0.412502	5.551761	0.339709
6	-1.726071	5.951477	0.643149
6	0.488469	6.497729	-0.173712
6	-2.125802	7.262167	0.426802
1	-2.416837	5.217997	1.051543
6	0.084361	7.808978	-0.383890
1	1.512337	6.211544	-0.413621
6	-1.223609	8.194226	-0.087665
1	-3.146084	7.559506	0.661847
1	0.790901	8.533354	-0.782735
1	-1.538527	9.222178	-0.257325
17	7.415741	-0.730908	-0.795092
1	1.235829	-1.393934	-2.707262
1	2.464348	-1.295653	-1.441180
1	-2.395541	-2.440229	-1.665579
1	-1.076376	-1.554321	-2.514408

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46	1.180179	-1.377069	-0.012634
15	3.252476	-0.535473	-0.128631
6	4.415255	-0.843543	1.247354
6	5.031699	-2.101182	1.343925
6	4.633650	0.098581	2.258324
6	5.857827	-2.401055	2.422696
1	4.863548	-2.849189	0.567554
6	5.457530	-0.207311	3.339964
1	4.165170	1.080176	2.202235
6	6.071510	-1.454552	3.424610
1	6.333883	-3.378231	2.481881
1	5.622414	0.537969	4.115988
1	6.714972	-1.690796	4.270085
6	4.177219	-1.100027	-1.597160
6	5.556345	-0.882412	-1.730572
6	3.488405	-1.773034	-2.614058
6	6.228697	-1.319872	-2.867822
1	6.104132	-0.368811	-0.940382
6	4.164963	-2.209269	-3.751364
1	2.417511	-1.949022	-2.507069
6	5.533553	-1.982097	-3.879702
1	7.298814	-1.144475	-2.963186
1	3.621573	-2.731568	-4.536635
1	6.062388	-2.324760	-4.767400
6	3.137127	1.284766	-0.247758
6	3.894782	2.039096	-1.149758

6	2.220848	1.940072	0.588516
6	3.744583	3.423696	-1.206808
1	4.600551	1.549824	-1.819256
6	2.085880	3.324286	0.541751
1	1.598125	1.352091	1.265984
6	2.847499	4.068912	-0.358895
1	4.333878	3.998733	-1.919048
1	1.367748	3.819716	1.193598
1	2.728920	5.150298	-0.408972
6	-1.101153	-3.293185	0.749857
6	-0.021659	-4.253341	0.304553
8	-0.880293	-1.972837	0.296361
6	1.248375	-3.933834	0.680358
6	1.563417	-2.745851	1.468987
1	2.085657	-4.545995	0.334458
6	-0.347051	-5.389266	-0.557938
6	-1.612871	-6.005224	-0.504554
6	0.581001	-5.894875	-1.491755
6	-1.933250	-7.073029	-1.336670
1	-2.352097	-5.654891	0.214655
6	0.259692	-6.962510	-2.320742
1	1.558029	-5.420129	-1.582355
6	-1.000113	-7.559837	-2.250219
1	-2.919380	-7.530474	-1.265638
1	0.994609	-7.324952	-3.038277
1	-1.251410	-8.393763	-2.903131
6	-1.478142	2.380682	-1.438810
6	-1.603140	-0.068785	-1.396191
6	-0.323124	0.491706	-1.697892
7	-0.316618	1.873167	-1.760245
8	0.731246	-0.194789	-1.884964
16	-2.740056	1.213353	-1.055532
6	-1.820479	-1.453512	-1.362946
6	-3.123248	-2.093213	-1.201639
6	-4.060596	-1.642088	-0.258797
6	-3.426704	-3.240105	-1.949696
6	-5.275291	-2.290242	-0.089297
1	-3.822770	-0.800016	0.388422
6	-4.643255	-3.896790	-1.800668
1	-2.696179	-3.624298	-2.661123
6	-5.556490	-3.409562	-0.870551
1	-5.991965	-1.938594	0.647950
1	-4.871796	-4.782422	-2.388386
1	-1.102793	-2.016723	-1.961001
6	-1.736688	3.815000	-1.375389
6	-0.736071	4.707909	-1.795827
6	-2.948344	4.332302	-0.892004
6	-0.944111	6.078871	-1.727734
1	0.200242	4.305487	-2.175471
6	-3.152709	5.704824	-0.828577
1	-3.736942	3.660990	-0.551938
6	-2.151780	6.582863	-1.244008
1	-0.160124	6.759028	-2.056041
1	-4.096300	6.091123	-0.448872
1	-2.313374	7.657899	-1.190525
17	-7.084086	-4.231498	-0.657596
1	-1.153038	-3.263880	1.854031
1	-2.094009	-3.628558	0.414270
1	2.580409	-2.716241	1.866966
1	0.830783	-2.498444	2.248584

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46	1.536241	-2.155974	0.673235
15	3.120590	-0.523188	0.948230
6	4.029556	-0.519609	2.533222
6	4.937273	-1.560638	2.782626
6	3.820372	0.451405	3.517786
6	5.631350	-1.617237	3.985903
1	5.103787	-2.326587	2.024048
6	4.512129	0.386186	4.727089
1	3.121437	1.268231	3.342162
6	5.420771	-0.642221	4.961851
1	6.339890	-2.424660	4.162278
1	4.344793	1.151178	5.483149
1	5.964465	-0.686619	5.903810
6	4.442590	-0.589532	-0.307779
6	5.694324	0.006956	-0.097777
6	4.195269	-1.262168	-1.511682
6	6.678834	-0.067955	-1.079389
1	5.899954	0.531654	0.835295
6	5.184463	-1.334507	-2.490072
1	3.218986	-1.717880	-1.677204
6	6.425847	-0.739205	-2.275174
1	7.647005	0.399503	-0.908730
1	4.984241	-1.861893	-3.421198
1	7.199771	-0.801196	-3.038298
6	2.371844	1.134558	0.830108
6	3.012125	2.205216	0.196777

6	1.097540	1.324626	1.384418
6	2.385644	3.446759	0.117376
1	3.998043	2.070251	-0.246322
6	0.479488	2.570135	1.312217
1	0.585962	0.484679	1.859849
6	1.121596	3.631306	0.674107
1	2.883713	4.270688	-0.391169
1	-0.512567	2.706906	1.739775
1	0.628239	4.599341	0.593217
6	-1.084179	-3.239358	1.648610
6	0.038600	-3.970460	0.931966
8	-1.250036	-1.884830	1.224480
6	1.295542	-4.108865	1.550124
6	1.788021	-3.157394	2.486679
1	1.997179	-4.831846	1.129644
6	-0.248166	-4.765257	-0.280865
6	-1.520052	-5.305008	-0.539210
6	0.763348	-4.988564	-1.235981
6	-1.764658	-6.046549	-1.691366
1	-2.331504	-5.160005	0.171514
6	0.517852	-5.728583	-2.385480
1	1.743948	-4.533930	-1.082577
6	-0.749640	-6.263571	-2.620424
1	-2.759369	-6.455563	-1.861886
1	1.315429	-5.873799	-3.112409
1	-0.945541	-6.836023	-3.525239
6	-0.702907	1.651832	-1.726366
6	-1.221830	-0.512532	-0.726619
6	0.062554	-0.395125	-1.265258
7	0.315206	0.835200	-1.845691
8	0.956156	-1.338285	-1.267522
16	-2.094365	0.969405	-0.899574
6	-1.726055	-1.774982	-0.138848
6	-3.219882	-1.974886	-0.219910
6	-4.057202	-1.659922	0.851802
6	-3.784913	-2.477767	-1.395776
6	-5.435877	-1.834833	0.757091
1	-3.623812	-1.282019	1.776177
6	-5.158641	-2.658384	-1.511666
1	-3.137928	-2.736832	-2.234592
6	-5.969015	-2.332357	-0.427151
1	-6.085085	-1.591752	1.594581
1	-5.592642	-3.055258	-2.425848
1	-1.239360	-2.570664	-0.725722
6	-0.694463	3.034292	-2.192157
6	0.394592	3.499122	-2.949252
6	-1.723533	3.934657	-1.874437
6	0.451981	4.823071	-3.365843
1	1.196723	2.805707	-3.194065
6	-1.664198	5.257444	-2.296760
1	-2.572976	3.605476	-1.275262
6	-0.575573	5.709602	-3.042456
1	1.305452	5.165745	-3.948714
1	-2.470740	5.940595	-2.036239
1	-0.528164	6.747199	-3.367624
17	-7.701450	-2.569633	-0.554260
1	-0.874047	-3.173955	2.720389
1	-2.035929	-3.782108	1.543815
1	2.798638	-3.295383	2.870818
1	1.114677	-2.646948	3.179917

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46	-1.037835	-0.543611	1.585718
15	-3.195720	-0.647026	2.425103
6	-3.243914	0.245696	4.017526
6	-2.266784	1.222285	4.253766
6	-4.246385	0.033875	4.971906
6	-2.295192	1.982370	5.419479
1	-1.479033	1.379909	3.512964
6	-4.267568	0.790776	6.141302
1	-5.014159	-0.720506	4.798380
6	-3.295911	1.766146	6.364957
1	-1.531999	2.739309	5.590195
1	-5.048164	0.619859	6.880245
1	-3.317380	2.355251	7.279882
6	-4.421494	0.208139	1.378890
6	-5.087681	1.375935	1.765034
6	-4.655952	-0.323896	0.101672
6	-5.975553	1.996742	0.886427
1	-4.914516	1.808137	2.750264
6	-5.552035	0.288614	-0.765746
1	-4.125424	-1.224571	-0.213030
6	-6.211160	1.455053	-0.375276
1	-6.487830	2.906764	1.194179
1	-5.727941	-0.140937	-1.751206
1	-6.907090	1.941500	-1.056309
6	-3.974315	-2.272050	2.740465
6	-5.347526	-2.482858	2.553148

6	-3.177543	-3.337889	3.179638
6	-5.906985	-3.734853	2.797908
1	-5.985615	-1.667875	2.214522
6	-3.740737	-4.586177	3.430119
1	-2.107175	-3.192735	3.315474
6	-5.106544	-4.788254	3.234868
1	-6.974279	-3.885063	2.644858
1	-3.108118	-5.405746	3.766336
1	-5.545860	-5.766918	3.418978
6	1.505693	-1.662186	0.293648
6	1.298756	-0.516617	1.281659
8	0.313585	-2.362770	-0.049020
6	0.859348	-0.736165	2.606276
6	-0.002776	-1.794466	2.979293
1	0.999250	0.074878	3.323763
6	1.916843	0.795031	0.992447
6	3.039405	0.923356	0.159877
6	1.392851	1.964279	1.576246
6	3.623824	2.168091	-0.062304
1	3.474625	0.045113	-0.311979
6	1.969031	3.206216	1.346116
1	0.483831	1.891726	2.177641
6	3.093317	3.313598	0.525843
1	4.498111	2.239643	-0.706921
1	1.524191	4.096904	1.789453
1	3.545250	4.286206	0.339247
6	-0.630829	1.948791	-1.019294
6	-0.362212	-0.466896	-1.486598
6	0.631310	0.361466	-2.068096
7	0.369025	1.751600	-1.808164
8	1.626303	-0.003923	-2.723002
16	-1.536301	0.462277	-0.590347
6	-0.294671	-1.932580	-1.308302
6	-1.657289	-2.589480	-1.354832
6	-2.479520	-2.357077	-2.464454
6	-2.155277	-3.373517	-0.309839
6	-3.767944	-2.872883	-2.531993
1	-2.107640	-1.740244	-3.282348
6	-3.448627	-3.896534	-0.355729
1	-1.537307	-3.567772	0.563592
6	-4.242469	-3.631443	-1.463582
1	-4.401541	-2.673311	-3.392824
1	-3.834510	-4.486039	0.474369
1	0.346613	-2.319549	-2.119528
6	-1.104700	3.240615	-0.532039
6	-0.552135	4.425621	-1.043885
6	-2.080314	3.328900	0.473452
6	-0.968816	5.659800	-0.560203
1	0.208582	4.358197	-1.819392
6	-2.495115	4.564445	0.954397
1	-2.513371	2.418480	0.893156
6	-1.939551	5.736494	0.439786
1	-0.534372	6.571151	-0.967452
1	-3.253200	4.611347	1.735639
1	-2.262777	6.705484	0.815530
17	-5.891318	-4.227011	-1.499637
1	2.173573	-2.410199	0.742558
1	1.984062	-1.287948	-0.619357
1	-0.341671	-1.839725	4.013870
1	0.025559	-2.748814	2.449749

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6	3.229198	-1.938345	0.212669
6	3.384814	-0.443842	0.144151
8	2.153583	-2.282278	1.067358
6	3.699930	0.251235	1.379769
6	3.785707	-0.308243	2.679320
1	4.197647	1.212712	1.251748
6	3.809777	0.212129	-1.097584
6	4.187636	-0.521699	-2.238399
6	3.809356	1.621311	-1.193990
6	4.547832	0.124278	-3.416287
1	4.222304	-1.607261	-2.205495
6	4.145054	2.259942	-2.378878
1	3.496488	2.223176	-0.341754
6	4.518516	1.514056	-3.498006
1	4.845668	-0.467480	-4.279877
1	4.106558	3.346872	-2.432465
1	4.787187	2.015604	-4.426101
6	0.458127	1.736823	-1.039585
6	1.091332	-0.501696	-0.194269
6	0.996155	-0.359144	-1.644976
7	0.706297	0.957003	-2.046851
8	1.227800	-1.272740	-2.442702
16	0.489310	0.961674	0.567525
6	0.939133	-1.864273	0.428750
6	-0.199730	-2.011927	1.402678
6	-1.512617	-1.875978	0.937235

6	0.011135	-2.285931	2.755779
6	-2.596846	-2.006996	1.796687
1	-1.690541	-1.662656	-0.117424
6	-1.064381	-2.429109	3.632140
1	1.026587	-2.391367	3.132898
6	-2.355903	-2.283176	3.140962
1	-3.614369	-1.894228	1.430109
1	-0.892104	-2.639736	4.686201
1	0.771470	-2.542497	-0.428539
6	0.171432	3.162834	-1.145030
6	0.206298	3.780410	-2.406450
6	-0.131481	3.938003	-0.013934
6	-0.057726	5.138215	-2.527978
1	0.447935	3.178565	-3.279908
6	-0.399237	5.294608	-0.141487
1	-0.157576	3.480956	0.976171
6	-0.362427	5.898681	-1.398423
1	-0.025098	5.608111	-3.509090
1	-0.636388	5.882462	0.743003
1	-0.568928	6.962856	-1.496755
17	-3.712667	-2.416899	4.242857
1	4.123712	-2.405801	0.644055
1	3.056347	-2.368714	-0.784720
1	4.483745	0.142910	3.385730
1	3.567528	-1.362472	2.854354
46	1.971248	0.773800	2.616127
15	0.808785	1.244219	4.533981
6	0.387310	-0.092162	5.713065
6	1.332301	-1.108683	5.909212
6	-0.830518	-0.151183	6.401838
6	1.067356	-2.161449	6.779898
1	2.275993	-1.076168	5.361079
6	-1.097212	-1.210331	7.268026
1	-1.576091	0.631323	6.258902
6	-0.151595	-2.216625	7.456772
1	1.807660	-2.947099	6.920635
1	-2.050355	-1.250151	7.793048
1	-0.365722	-3.046996	8.127379
6	1.681029	2.483921	5.560440
6	1.350416	2.738210	6.897936
6	2.717475	3.212597	4.963663
6	2.045880	3.705416	7.620013
1	0.544877	2.179965	7.376326
6	3.408591	4.183297	5.684856
1	2.981113	3.000807	3.923983
6	3.074129	4.428104	7.015304
1	1.783829	3.895308	8.659494
1	4.213327	4.741400	5.209530
1	3.617348	5.180703	7.584273
6	-0.810828	2.010131	4.155362
6	-1.195268	3.293568	4.558499
6	-1.676166	1.266320	3.337836
6	-2.422757	3.818227	4.151066
1	-0.537793	3.888827	5.191426
6	-2.904976	1.783268	2.947173
1	-1.369004	0.276227	2.994688
6	-3.279365	3.066568	3.350308
1	-2.709975	4.820033	4.466733
1	-3.566398	1.190322	2.316621
1	-4.235863	3.479759	3.034999

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6	1.374835	-2.996435	-0.340817
6	1.797089	-1.623862	0.187230
8	0.004296	-3.095354	-0.000728
6	1.984284	-1.657112	1.714035
6	1.704332	-2.723870	2.569845
1	2.721619	-0.931006	2.067495
6	3.097596	-1.109981	-0.411429
6	3.926888	-1.921510	-1.190881
6	3.513719	0.201551	-0.143156
6	5.130586	-1.432020	-1.697638
1	3.643075	-2.948905	-1.411646
6	4.709279	0.694841	-0.655038
1	2.893581	0.844974	0.483223
6	5.524789	-0.122950	-1.436627
1	5.760330	-2.082016	-2.302877
1	5.005903	1.719904	-0.439013
1	6.463137	0.258083	-1.835441
6	0.244400	1.754206	-0.293247
6	0.523454	-0.772390	-0.253318
6	0.752688	-0.005970	-1.572745
7	0.599001	1.368126	-1.487708
8	1.029337	-0.601686	-2.600875
16	0.057608	0.501916	0.955616
6	-0.565878	-1.900362	-0.497683
6	-1.946702	-1.714400	0.057184
6	-2.810970	-0.782368	-0.525688

6	-2.408879	-2.492262	1.121937
6	-4.110084	-0.618121	-0.056048
1	-2.469816	-0.178637	-1.367659
6	-3.712167	-2.353141	1.596112
1	-1.747464	-3.225531	1.579010
6	-4.544226	-1.410145	1.004503
1	-4.776963	0.111373	-0.508758
1	-4.068998	-2.968157	2.419538
1	-0.630141	-1.980771	-1.597681
6	0.001043	3.148724	0.049097
6	0.132806	4.131826	-0.946940
6	-0.370353	3.533557	1.348262
6	-0.104834	5.465567	-0.647283
1	0.420658	3.827465	-1.950548
6	-0.611393	4.869183	1.640971
1	-0.475909	2.786750	2.136022
6	-0.478463	5.836981	0.645071
1	0.000666	6.220636	-1.423448
1	-0.902230	5.156087	2.649591
1	-0.667053	6.883547	0.876878
17	-6.168316	-1.191977	1.624226
1	1.906080	-3.832051	0.123419
1	1.494005	-3.049220	-1.435271
1	2.266056	-2.831572	3.497817
1	1.201033	-3.626905	2.222435
46	0.291395	-1.120932	2.931874
15	-1.319062	-0.698506	4.532624
6	-0.624877	-0.386244	6.198977
6	0.670032	0.143708	6.275377
6	-1.333923	-0.621877	7.382996
6	1.240985	0.445530	7.508751
1	1.228984	0.312622	5.351458
6	-0.756729	-0.331940	8.617637
1	-2.344917	-1.027688	7.340154
6	0.528275	0.204291	8.682622
1	2.247139	0.858987	7.554314
1	-1.315293	-0.523623	9.532438
1	0.976622	0.429361	9.648876
6	-2.295297	0.817743	4.192440
6	-2.495169	1.845673	5.120298
6	-2.849325	0.944887	2.909761
6	-3.237532	2.974140	4.771589
1	-2.076352	1.766660	6.123092
6	-3.606136	2.061631	2.569461
1	-2.675961	0.159985	2.171706
6	-3.798787	3.082519	3.500905
1	-3.382421	3.768423	5.502186
1	-4.034664	2.140101	1.570404
1	-4.378645	3.964202	3.233212
6	-2.612253	-1.963222	4.829734
6	-3.945551	-1.644928	5.115152
6	-2.239514	-3.312035	4.740123
6	-4.886872	-2.655453	5.304602
1	-4.254958	-0.601914	5.182871
6	-3.178455	-4.320489	4.938712
1	-1.205406	-3.565979	4.497288
6	-4.506111	-3.993019	5.216652
1	-5.922179	-2.394743	5.518910
1	-2.876552	-5.363982	4.865175
1	-5.243847	-4.780522	5.360193

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6	-2.851389	-2.517890	-2.473627
6	-2.781408	-1.003974	-2.572969
8	-1.692605	-3.072861	-1.882111
6	-1.566039	-0.377631	-2.942580
6	-0.609705	-1.051603	-3.741426
6	-3.958257	-0.195560	-2.236190
6	-5.249005	-0.763365	-2.266938
6	-3.849331	1.169616	-1.894904
6	-6.370931	-0.008251	-1.949879
1	-5.375727	-1.807721	-2.542576
6	-4.974173	1.918170	-1.572918
1	-2.871822	1.644461	-1.835799
6	-6.240831	1.334161	-1.593902
1	-7.354937	-0.473102	-1.978361
1	-4.858525	2.963107	-1.287647
1	-7.120179	1.921826	-1.337113
6	-3.094838	0.318154	1.187008
6	-2.372719	-1.753711	0.102155
6	-3.751152	-1.720927	0.483905
7	-4.100843	-0.502569	1.099101
8	-4.578291	-2.637560	0.281227
16	-1.558669	-0.288211	0.554789
6	-1.728976	-2.982246	-0.425493
6	-0.319550	-3.186355	0.057923
6	-0.073683	-3.941951	1.206693
6	0.757766	-2.570532	-0.585948

6	1.214807	-4.083876	1.712596
1	-0.904272	-4.427443	1.718446
6	2.054444	-2.701411	-0.098411
1	0.578795	-1.978342	-1.483290
6	2.266166	-3.458240	1.049821
1	1.399918	-4.674674	2.606267
1	2.889158	-2.220605	-0.602409
1	-2.367538	-3.813234	-0.079650
6	-3.191391	1.667654	1.740334
6	-4.432136	2.129921	2.212587
6	-2.086345	2.530662	1.801465
6	-4.556181	3.411407	2.734761
1	-5.292545	1.466046	2.156832
6	-2.214436	3.811873	2.324126
1	-1.113576	2.199476	1.437506
6	-3.449530	4.258747	2.793956
1	-5.524413	3.753346	3.096622
1	-1.345081	4.465630	2.363387
1	-3.548823	5.262697	3.202705
17	3.896610	-3.628137	1.674367
1	-2.922286	-2.980251	-3.471851
1	-3.744446	-2.814142	-1.904714
46	-2.378732	-0.847958	-4.887650
15	-1.934859	-1.161708	-7.120154
6	-1.188416	0.273320	-7.970089
6	-0.076850	0.885205	-7.372660
6	-1.679919	0.778681	-9.178838
6	0.536936	1.975714	-7.979671
1	0.306746	0.500987	-6.426416
6	-1.070261	1.880169	-9.777385
1	-2.537648	0.309092	-9.659166
6	0.037153	2.478617	-9.181415
1	1.401485	2.440728	-7.509105
1	-1.461747	2.267208	-10.716434
1	0.511577	3.338220	-9.651410
6	-0.822344	-2.550977	-7.514359
6	-0.040414	-2.571202	-8.676273
6	-0.773914	-3.639529	-6.634157
6	0.770602	-3.668341	-8.954871
1	-0.069841	-1.727544	-9.366457
6	0.032225	-4.738548	-6.919401
1	-1.370617	-3.616073	-5.719720
6	0.806555	-4.752211	-8.078824
1	1.375837	-3.676126	-9.859447
1	0.063280	-5.580485	-6.230167
1	1.442124	-5.608095	-8.298462
6	-3.477257	-1.494282	-8.036885
6	-3.587915	-2.454096	-9.049076
6	-4.605344	-0.741371	-7.676869
6	-4.807529	-2.650495	-9.694573
1	-2.720512	-3.048244	-9.335257
6	-5.817698	-0.932031	-8.331568
1	-4.525309	-0.000811	-6.877746
6	-5.920419	-1.889811	-9.340599
1	-4.886800	-3.400460	-10.479587
1	-6.685535	-0.339348	-8.048534
1	-6.870635	-2.046450	-9.847861
1	0.256913	-0.494763	-4.097162
1	-0.472518	-2.129423	-3.661863
1	-1.465768	0.700320	-2.830822

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6	-2.993691	-2.699666	-1.818817
6	-2.946667	-1.196683	-1.701649
8	-1.774326	-3.264515	-1.379233
6	-1.814776	-0.506014	-2.276597
6	-1.036664	-1.059976	-3.302859
6	-4.156096	-0.418232	-1.398643
6	-5.419686	-1.038261	-1.291641
6	-4.091755	0.979369	-1.196026
6	-6.553315	-0.298408	-0.978194
1	-5.522370	-2.105910	-1.464448
6	-5.226813	1.708390	-0.866018
1	-3.141285	1.503082	-1.270243
6	-6.464377	1.074697	-0.752943
1	-7.516373	-0.801295	-0.908145
1	-5.142175	2.779792	-0.690688
1	-7.353447	1.648204	-0.497624
6	-2.732217	0.288736	1.787255
6	-2.202380	-1.723449	0.474822
6	-3.487955	-1.724931	1.153112
7	-3.750137	-0.517865	1.820436
8	-4.300642	-2.659475	1.100572
16	-1.292558	-0.303909	0.932022
6	-1.597074	-3.027137	0.033184
6	-0.134129	-3.169996	0.350360
6	0.258584	-3.689161	1.586274
6	0.847594	-2.740583	-0.545801

6	1.602586	-3.783085	1.931256
1	-0.498945	-4.027070	2.293203
6	2.198059	-2.828446	-0.220756
1	0.551994	-2.336669	-1.513329
6	2.558750	-3.350163	1.017501
1	1.903637	-4.191157	2.892840
1	2.960024	-2.494897	-0.920846
1	-2.169526	-3.805641	0.566467
6	-2.746973	1.626019	2.374016
6	-3.953076	2.125182	2.893997
6	-1.599189	2.431170	2.426047
6	-4.004506	3.395435	3.451828
1	-4.841647	1.499352	2.846783
6	-1.654777	3.701189	2.987090
1	-0.651583	2.061497	2.034390
6	-2.856946	4.188058	3.500012
1	-4.945123	3.772439	3.848620
1	-0.756157	4.313494	3.023927
1	-2.899189	5.183980	3.937148
17	4.257505	-3.472904	1.432118
1	-3.114631	-3.021233	-2.862711
1	-3.831462	-3.106114	-1.235151
46	-2.970114	-0.444315	-4.072286
15	-3.738765	-0.502569	-6.236046
6	-3.324233	0.936445	-7.288270
6	-2.052370	1.509235	-7.146267
6	-4.213442	1.476089	-8.225451
6	-1.673919	2.593024	-7.933889
1	-1.359129	1.100728	-6.408402
6	-3.835389	2.565844	-9.007222
1	-5.205154	1.041258	-8.348515
6	-2.566682	3.124424	-8.864122
1	-0.683837	3.029484	-7.814368
1	-4.535778	2.978347	-9.731340
1	-2.275305	3.977694	-9.473907
6	-3.248117	-1.945869	-7.248415
6	-3.039741	-1.872992	-8.630708
6	-3.087815	-3.177895	-6.598800
6	-2.685003	-3.013038	-9.349373
1	-3.158105	-0.922511	-9.150837
6	-2.745255	-4.317752	-7.320256
1	-3.231237	-3.235745	-5.517482
6	-2.540357	-4.235879	-8.697355
1	-2.523118	-2.944081	-10.423793
1	-2.627090	-5.269573	-6.805071
1	-2.263230	-5.124725	-9.261235
6	-5.569795	-0.556741	-6.245674
6	-6.321952	-1.187776	-7.243623
6	-6.234729	0.067055	-5.179825
6	-7.713909	-1.185392	-7.179537
1	-5.816829	-1.681823	-8.073965
6	-7.625498	0.076609	-5.122356
1	-5.648600	0.541191	-4.386233
6	-8.366357	-0.551620	-6.122925
1	-8.290466	-1.680383	-7.959116
1	-8.131445	0.566883	-4.292390
1	-9.453865	-0.552869	-6.075435
1	-0.192054	-0.492149	-3.691331
1	-0.999001	-2.134742	-3.476740
1	-1.607745	0.516949	-1.966642

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6	3.362374	-2.398215	-1.914549
6	3.165830	-1.667653	-0.581359
8	2.273500	-1.977702	-2.714966
6	2.061319	-2.321427	0.242174
6	1.196652	-3.328497	-0.170985
6	4.405763	-1.667051	0.302041
6	5.396286	-2.645036	0.131943
6	4.533475	-0.773296	1.371537
6	6.490180	-2.713315	0.995093
1	5.324510	-3.355782	-0.690210
6	5.630277	-0.832808	2.228301
1	3.764187	-0.020062	1.545183
6	6.613609	-1.803947	2.043174
1	7.246063	-3.483624	0.844273
1	5.714589	-0.116871	3.044274
1	7.468077	-1.855060	2.716091
6	2.603658	2.012592	0.039283
6	2.732648	-0.242609	-1.123542
6	3.925931	0.732819	-1.222621
7	3.760513	1.935122	-0.557087
8	4.912771	0.440790	-1.877011
16	1.517451	0.625456	-0.082107
6	2.246042	-0.568373	-2.600980
6	0.906716	-0.034964	-3.002007
6	0.818405	1.232624	-3.580255
6	-0.262808	-0.759656	-2.763263

6	-0.415305	1.781108	-3.914527
1	1.727638	1.803250	-3.771601
6	-1.505495	-0.231325	-3.097386
1	-0.199509	-1.749404	-2.313456
6	-1.564965	1.037513	-3.667185
1	-0.482542	2.766946	-4.366940
1	-2.416591	-0.795828	-2.915352
1	3.022506	-0.144724	-3.259973
6	2.209164	3.180247	0.817189
6	3.133499	4.226120	0.984118
6	0.942398	3.282075	1.413745
6	2.796010	5.343031	1.734491
1	4.112944	4.141192	0.520133
6	0.609404	4.403450	2.161923
1	0.207738	2.486924	1.290437
6	1.535088	5.433912	2.325606
1	3.518825	6.146027	1.861988
1	-0.374915	4.474480	2.619178
1	1.272554	6.310566	2.914512
17	-3.124970	1.711589	-4.090923
1	3.316572	-3.489805	-1.822165
1	4.320212	-2.111418	-2.376951
46	2.856108	-4.223808	0.907922
15	3.701161	-6.166712	1.764114
6	4.936977	-5.678454	3.030454
6	4.611792	-4.577159	3.838206
6	6.178415	-6.301362	3.201847
6	5.499796	-4.120751	4.807483
1	3.654540	-4.071003	3.685843
6	7.073831	-5.832433	4.163043
1	6.449556	-7.157071	2.583355
6	6.736397	-4.745918	4.967792
1	5.234520	-3.263662	5.424639
1	8.038315	-6.322914	4.285058
1	7.439112	-4.381322	5.715087
6	2.564762	-7.282032	2.670691
6	2.930146	-7.967419	3.835983
6	1.273848	-7.458250	2.154222
6	2.021993	-8.815357	4.467242
1	3.931122	-7.840715	4.249466
6	0.371127	-8.313083	2.780125
1	0.979505	-6.911194	1.256606
6	0.743685	-8.991687	3.939652
1	2.315527	-9.343511	5.372994
1	-0.627798	-8.442200	2.366892
1	0.036307	-9.654518	4.435075
6	4.636724	-7.304346	0.671822
6	4.713196	-8.686817	0.880036
6	5.321725	-6.744217	-0.415658
6	5.461313	-9.489023	0.020160
1	4.188955	-9.142128	1.720088
6	6.077194	-7.544365	-1.267637
1	5.254094	-5.668467	-0.591778
6	6.145808	-8.920439	-1.052233
1	5.509820	-10.563225	0.191493
1	6.604579	-7.093708	-2.106782
1	6.728911	-9.549311	-1.722737
1	1.832582	-1.791633	1.170442
1	1.185519	-3.700573	-1.194978
1	0.296762	-3.530319	0.409814

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46	3.292636	0.125790	-1.844062
15	3.655604	1.572612	-3.624162
6	5.416711	1.654129	-4.108594
6	6.180471	0.484377	-3.991496
6	6.018428	2.812109	-4.614696
6	7.516717	0.468878	-4.381834
1	5.716219	-0.416608	-3.584353
6	7.359602	2.798041	-4.992815
1	5.441169	3.730988	-4.713526
6	8.108791	1.628271	-4.881065
1	8.097150	-0.447462	-4.289619
1	7.818503	3.706124	-5.380301
1	9.155894	1.621513	-5.177908
6	2.780532	1.202753	-5.183240
6	3.445522	0.782734	-6.341515
6	1.379712	1.300208	-5.194289
6	2.723320	0.473491	-7.493083
1	4.531847	0.703104	-6.353189
6	0.665780	0.998152	-6.349011
1	0.853768	1.608136	-4.289226
6	1.335067	0.583008	-7.501035
1	3.253043	0.154624	-8.389301
1	-0.419697	1.083692	-6.348818
1	0.773314	0.345096	-8.402731
6	3.179390	3.299005	-3.257920
6	2.870265	4.228190	-4.261026

6	3.144640	3.706621	-1.917872
6	2.552471	5.542653	-3.925740
1	2.883136	3.924338	-5.307627
6	2.830116	5.021542	-1.585082
1	3.350598	2.976700	-1.132768
6	2.537685	5.942360	-2.589817
1	2.317150	6.257479	-4.712598
1	2.801372	5.322742	-0.539385
1	2.284027	6.969157	-2.331613
6	0.974660	-1.878379	1.667426
6	1.593020	-0.508192	1.642210
8	-0.334702	-1.980492	1.113359
6	0.929246	0.513092	2.417132
6	-0.177236	0.341827	3.167473
1	1.333788	1.523465	2.357992
6	2.802852	-0.254363	0.988283
6	3.389625	-1.191448	0.043056
6	3.535299	0.979148	1.170684
6	4.631489	-0.961947	-0.576337
1	2.942479	-2.174039	-0.080446
6	4.628096	1.282327	0.411780
1	3.223069	1.679827	1.939947
6	5.119496	0.370703	-0.590874
1	5.132454	-1.754147	-1.129407
1	5.140155	2.233638	0.549672
1	6.044541	0.602290	-1.116379
6	-0.791615	1.980967	-1.126467
6	-0.376494	-0.395892	-0.721828
6	0.421487	0.193165	-1.709790
7	0.184590	1.551444	-1.883310
8	1.290926	-0.429859	-2.438750
16	-1.524139	0.744591	-0.110988
6	-0.362740	-1.825757	-0.307962
6	-1.522404	-2.664597	-0.817861
6	-2.167016	-2.364174	-2.020543
6	-1.918893	-3.804464	-0.112150
6	-3.186267	-3.175794	-2.512271
1	-1.873411	-1.479418	-2.585116
6	-2.937779	-4.625414	-0.583104
1	-1.425788	-4.047311	0.825315
6	-3.560871	-4.299275	-1.782723
1	-3.685723	-2.934385	-3.447439
1	-3.243231	-5.506485	-0.024127
1	0.570903	-2.247419	-0.730731
6	-1.256874	3.364400	-1.114065
6	-0.761431	4.262516	-2.075412
6	-2.187609	3.831794	-0.173279
6	-1.186130	5.584904	-2.090679
1	-0.042338	3.903321	-2.810230
6	-2.610072	5.155656	-0.193073
1	-2.579992	3.156938	0.587884
6	-2.111951	6.038647	-1.151113
1	-0.794700	6.266399	-2.844660
1	-3.330317	5.501384	0.546066
1	-2.443523	7.075132	-1.164826
17	-4.846951	-5.325618	-2.387547
1	0.843151	-2.187083	2.713196
1	1.620677	-2.631331	1.197926
1	-0.621410	1.178603	3.702366
1	-0.681221	-0.618116	3.262383

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6	-1.932648	-2.217298	2.760859
6	-1.556122	-0.757802	2.750241
8	-3.235402	-2.394730	2.245765
6	-2.464232	0.137322	3.472699
6	-3.527685	-0.236681	4.200818
1	-2.229795	1.199434	3.444397
6	-0.159177	-0.383970	2.683993
6	0.863422	-1.377742	2.473415
6	0.258121	0.962006	2.795907
6	2.241817	-1.008925	2.457988
1	0.625801	-2.429996	2.610859
6	1.598117	1.322719	2.698932
1	-0.474178	1.752765	2.936541
6	2.589791	0.353742	2.513771
1	3.011629	-1.774204	2.547195
1	1.875986	2.373411	2.761607
1	3.638746	0.643885	2.453725
6	-1.884449	1.410657	-0.526232
6	-2.432659	-0.674907	0.705997
6	-1.298587	-0.717626	-0.206712
7	-1.001011	0.494788	-0.812548
8	-0.600125	-1.744088	-0.397760
16	-3.212513	0.900521	0.520697
6	-3.247537	-1.949606	0.891470
6	-4.681402	-1.830404	0.453482
6	-5.045945	-2.127919	-0.860804

6	-5.654506	-1.362534	1.339780	1	1.376734	1.827422	-0.562275
6	-6.358284	-1.962859	-1.292799	6	4.070296	3.887207	-0.884207
1	-4.295195	-2.495841	-1.560031	1	6.017609	3.273380	-1.577186
6	-6.972208	-1.194052	0.928268	1	2.035065	4.197239	-0.232774
1	-5.374811	-1.122191	2.365162	1	4.364372	4.923399	-0.725268
6	-7.307433	-1.496459	-0.388528	6	4.283668	-1.439683	-1.820095
1	-6.640351	-2.199729	-2.315448	6	4.697587	-1.789714	-3.110480
1	-7.727689	-0.829991	1.619976	6	5.084727	-1.807734	-0.728240
1	-2.730754	-2.706993	0.276233	6	5.884727	-2.494560	-3.303571
6	-1.817666	2.770593	-1.047046	1	4.093461	-1.509482	-3.972713
6	-0.907293	3.061033	-2.078104	6	6.276813	-2.497276	-0.923599
6	-2.643533	3.794807	-0.558543	1	4.766447	-1.543330	0.282711
6	-0.823718	4.345054	-2.598427	6	6.676716	-2.848109	-2.213415
1	-0.277981	2.261921	-2.465228	1	6.191866	-2.764888	-4.312642
6	-2.555817	5.078270	-1.083185	1	6.890432	-2.770420	-0.066732
1	-3.350194	3.592821	0.246104	1	7.604155	-3.397183	-2.367257
6	-1.645890	5.357754	-2.102516				
1	-0.114837	4.556550	-3.396984	**2-IM8-3**			
1	-3.199107	5.864466	-0.693297	6	-0.103688	-4.812617	-0.531580
1	-1.578846	6.364028	-2.511814	6	-0.103077	-3.474036	0.217720
17	-8.964155	-1.290748	-0.920113	8	-1.469122	-5.124882	-0.716111
1	-1.952697	-2.611959	3.785946	6	-0.468282	-3.652866	1.680725
1	-1.222638	-2.818567	2.175532	6	-0.860826	-4.777489	2.279863
1	-4.108217	0.505247	4.745697	1	-0.364226	-2.744528	2.277752
1	-3.844729	-1.272643	4.295609	6	1.242816	-2.775630	0.166953
46	1.518713	-1.123426	0.401537	6	2.418722	-3.564616	0.072954
15	2.739031	-0.517578	-1.468686	6	1.370618	-1.395080	0.311935
6	1.867659	-0.482832	-3.079468	6	3.685521	-2.937993	-0.001546
6	2.058853	0.516096	-4.042696	1	2.361721	-4.647654	0.191049
6	0.934103	-1.498478	-3.328698	6	2.628374	-0.779623	0.278672
6	1.325360	0.501026	-5.227775	1	0.481429	-0.778133	0.447347
1	2.784244	1.310852	-3.866471	6	3.777648	-1.537202	0.093682
6	0.209581	-1.517375	-4.517049	1	4.588968	-3.544766	0.014649
1	0.760377	-2.260521	-2.569131	1	2.698843		0.301246
6	0.398715	-0.513092	-5.465716	0.385681			
1	1.478677	1.284633	-5.968031	1	4.754082	-1.057446	0.051491
1	-0.514497	-2.310513	-4.696677	6	-2.080864	-0.323212	-0.607315
1	-0.177504	-0.519108	-6.389376	6	-1.276827	-2.734398	-0.546145
6	3.319726	1.213352	-1.279030	6	-0.800908	-1.803002	-1.680609
6	4.624789	1.633124	-1.560633	7	-1.300982	-0.515902	-1.635917
6	2.394581	2.152156	-0.796375	8	-0.078922	-2.227331	-2.570372
6	4.997371	2.961864	-1.358259	16	-2.296431	-1.662141	0.522100
1	5.356486	0.921811	-1.942798	6	-2.061798	-3.946968	-1.223401
6	2.763915	3.480505	-0.609517	6	-3.544305	-3.980122	-1.023292

6	-4.379539	-3.298635	-1.910341
6	-4.104883	-4.641689	0.071276
6	-5.756346	-3.266856	-1.712589
1	-3.949643	-2.780992	-2.768380
6	-5.479338	-4.629305	0.280622
1	-3.456932	-5.170389	0.768103
6	-6.288739	-3.937634	-0.615962
1	-6.406033	-2.736053	-2.403768
1	-5.917514	-5.146971	1.130270
1	-1.831799	-3.868844	-2.299897
6	-2.747995	0.948444	-0.364712
6	-2.431973	2.048493	-1.181190
6	-3.701918	1.100490	0.653851
6	-3.054653	3.270816	-0.975990
1	-1.692622	1.924045	-1.968527
6	-4.325127	2.325263	0.851496
1	-3.971748	0.254955	1.285871
6	-4.002201	3.412088	0.038787
1	-2.802041	4.118871	-1.608858
1	-5.067732	2.432663	1.638909
1	-4.491941	4.371293	0.195767
17	-8.021579	-3.918028	-0.359964
1	0.355643	-5.634723	0.025045
1	0.417545	-4.700404	-1.502956
1	-1.071838	-4.789068	3.347523
1	-0.995914	-5.719193	1.750465
46	2.775527	-3.487728	-2.102680
15	3.169517	-3.610343	-4.312700
6	3.264825	-2.004573	-5.197999
6	4.149283	-1.042179	-4.684621
6	2.488249	-1.677123	-6.314873
6	4.270741	0.205079	-5.286214
1	4.747314	-1.280398	-3.802511
6	2.598039	-0.418038	-6.906667
1	1.793916	-2.405875	-6.731687
6	3.490508	0.522552	-6.399315
1	4.968563	0.935747	-4.880371
1	1.984767	-0.176521	-7.773421
1	3.577117	1.502316	-6.865845
6	4.750924	-4.422705	-4.777841
6	5.516573	-4.057582	-5.892097
6	5.192580	-5.479419	-3.969671
6	6.696371	-4.738106	-6.189881
1	5.188731	-3.237632	-6.531869
6	6.363262	-6.167124	-4.274541
1	4.606527	-5.752119	-3.088775
6	7.119978	-5.794400	-5.385316
1	7.284595	-4.443115	-7.057411
1	6.691654	-6.987888	-3.638743
1	8.041836	-6.323792	-5.620804
6	1.930460	-4.565542	-5.275610
6	2.216445	-5.176538	-6.503433
6	0.637319	-4.676061	-4.746573
6	1.227855	-5.880797	-7.187071
1	3.217643	-5.101023	-6.929125
6	-0.351989	-5.374719	-5.434647
1	0.414556	-4.198253	-3.789904
6	-0.057319	-5.980695	-6.654675
1	1.462400	-6.354548	-8.139210
1	-1.353284	-5.453169	-5.013034
1	-0.827264	-6.533933	-7.189888

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46	-0.075337	-0.461513	-0.298636
15	1.081253	1.478624	-0.206864
6	0.159928	2.836954	-1.015128
6	-1.238319	2.816809	-0.908994
6	0.776294	3.898559	-1.687177
6	-2.003014	3.848912	-1.445929
1	-1.725351	1.978817	-0.403990
6	0.007938	4.921931	-2.238217
1	1.860718	3.929924	-1.784920
6	-1.380097	4.902217	-2.114081
1	-3.087590	3.825781	-1.348392
1	0.498202	5.739122	-2.764277
1	-1.976934	5.705095	-2.543412
6	1.480633	2.149330	1.447957
6	0.934839	3.334938	1.951868
6	2.328736	1.389074	2.266506
6	1.225200	3.743275	3.253665
1	0.280084	3.944836	1.330380
6	2.615470	1.796033	3.564360
1	2.768595	0.470473	1.874892
6	2.058699	2.974881	4.063165
1	0.796189	4.669005	3.634029
1	3.273251	1.191933	4.187888
1	2.278720	3.294386	5.080178
6	2.721326	1.414361	-1.016231

6	3.697101	2.398190	-0.800237
6	3.019290	0.333503	-1.855709
6	4.936305	2.309698	-1.428229
1	3.487400	3.235067	-0.133584
6	4.261050	0.245629	-2.481489
1	2.272707	-0.447234	-2.005427
6	5.219318	1.234543	-2.270483
1	5.685496	3.080237	-1.255510
1	4.482165	-0.602189	-3.127428
1	6.191692	1.163773	-2.754754
6	-2.355091	-2.224446	-1.080012
6	-2.773528	-1.071570	-1.962970
8	-1.053569	-2.259604	-0.640914
6	-1.870689	-0.186697	-2.462209
6	-0.416295	-0.248649	-2.327962
1	-2.260031	0.681413	-3.001271
6	-4.218608	-0.907024	-2.187576
6	-5.085960	-2.015449	-2.148569
6	-4.798447	0.359979	-2.391292
6	-6.458860	-1.865989	-2.321831
1	-4.677428	-3.013878	-2.001103
6	-6.169647	0.508983	-2.563144
1	-4.163414	1.245396	-2.382404
6	-7.010633	-0.603902	-2.531317
1	-7.100858	-2.745275	-2.296154
1	-6.587121	1.504340	-2.709850
1	-8.084799	-0.486367	-2.663125
6	-1.881525	-1.121414	2.139351
6	-0.141739	-2.890388	2.186237
6	-1.561155	-3.337502	2.061176
7	-2.469114	-2.265494	2.080483
8	-1.901668	-4.505130	1.972128
16	-0.078535	-1.138163	2.254122
6	0.876608	-3.779720	2.160656
6	2.309203	-3.594401	2.209631
6	2.938705	-2.387595	2.568455
6	3.127714	-4.690658	1.875345
6	4.319850	-2.267908	2.569182
1	2.351502	-1.531219	2.891978
6	4.510602	-4.586381	1.862446
1	2.660486	-5.638309	1.611438
6	5.093956	-3.369013	2.206086
1	4.793337	-1.332335	2.857363
1	5.129085	-5.438456	1.593398
1	0.537498	-4.811820	2.042912
6	-2.558210	0.164750	2.056224
6	-3.840323	0.220048	1.483884
6	-1.947044	1.346190	2.505866
6	-4.491077	1.440720	1.359237
1	-4.299860	-0.700395	1.126788
6	-2.612864	2.560502	2.395408
1	-0.957944	1.310085	2.964984
6	-3.882196	2.610054	1.818187
1	-5.478275	1.481606	0.903067
1	-2.139244	3.471568	2.756850
1	-4.396573	3.564615	1.721607
17	6.832415	-3.219967	2.198226
1	-2.560923	-3.162150	-1.641447
1	-3.085474	-2.250510	-0.235900
1	0.091506	0.606537	-2.787580
1	0.041390	-1.185879	-2.664129

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46	-1.174481	0.047407	1.452943
15	-2.831173	0.697431	2.818718
6	-2.313987	2.061468	3.915401
6	-1.463142	3.029787	3.361111
6	-2.725458	2.194725	5.245603
6	-1.052397	4.124395	4.115385
1	-1.122523	2.912337	2.328758
6	-2.299273	3.283680	6.004051
1	-3.379135	1.448467	5.695249
6	-1.468948	4.250717	5.440646
1	-0.399361	4.873920	3.670210
1	-2.619358	3.375192	7.040466
1	-1.141563	5.100908	6.036330
6	-4.321711	1.321367	1.964816
6	-4.876627	2.585537	2.193080
6	-4.906996	0.479894	1.006639
6	-5.995255	2.998902	1.468963
1	-4.436978	3.252975	2.933739
6	-6.023758	0.893561	0.289692
1	-4.477461	-0.506703	0.819585
6	-6.567754	2.158564	0.517208
1	-6.418678	3.985167	1.652020
1	-6.466608	0.229168	-0.450421
1	-7.437790	2.486734	-0.048344
6	-3.507673	-0.628773	3.880628

6	-4.736036	-0.470325	4.540025
6	-2.821831	-1.843468	3.999736
6	-5.254118	-1.501620	5.317128
1	-5.290356	0.463361	4.441924
6	-3.344555	-2.875666	4.776144
1	-1.881241	-1.981721	3.465169
6	-4.560310	-2.705687	5.435249
1	-6.207104	-1.367374	5.825868
1	-2.807424	-3.820141	4.850386
1	-4.972641	-3.514598	6.035879
6	1.518721	-0.526930	0.214450
6	1.701532	0.611025	1.187254
8	0.330418	-1.247885	0.428377
6	1.084131	0.636375	2.411625
6	0.178136	-0.343837	2.979683
1	1.212923	1.544176	3.004048
6	2.517236	1.743258	0.725863
6	3.488654	1.568543	-0.279397
6	2.327417	3.047838	1.224839
6	4.247457	2.638600	-0.742435
1	3.669579	0.576673	-0.691512
6	3.083358	4.115482	0.757681
1	1.549971	3.235110	1.964410
6	4.052019	3.918408	-0.226941
1	4.997605	2.469549	-1.513141
1	2.900987	5.113940	1.153368
1	4.641918	4.756172	-0.594326
6	-1.053491	1.965534	-1.490016
6	-0.901118	-0.509376	-1.734058
6	0.020904	0.264009	-2.542221
7	-0.137088	1.670875	-2.346345
8	0.873205	-0.191068	-3.309271
16	-1.991289	0.568042	-0.853915
6	-0.508057	-1.714267	-1.100340
6	-1.489757	-2.641621	-0.477979
6	-2.864978	-2.518976	-0.706847
6	-1.047496	-3.659650	0.380459
6	-3.781836	-3.352859	-0.071249
1	-3.237547	-1.773228	-1.407407
6	-1.944936	-4.502986	1.022115
1	0.018297	-3.772347	0.566320
6	-3.309655	-4.329379	0.797239
1	-4.847826	-3.243185	-0.255453
1	-1.591794	-5.281827	1.693844
1	0.333549	-2.199144	-1.603759
6	-1.344256	3.306433	-0.995332
6	-0.370235	4.307629	-1.143913
6	-2.532419	3.602730	-0.310036
6	-0.574512	5.568234	-0.597151
1	0.554009	4.069421	-1.668005
6	-2.738373	4.871224	0.220061
1	-3.303381	2.838210	-0.197454
6	-1.757149	5.854202	0.085841
1	0.195348	6.330862	-0.701693
1	-3.665880	5.092025	0.746019
1	-1.914906	6.842805	0.512988
17	-4.453841	-5.368039	1.617616
1	2.377533	-1.223211	0.259856
1	1.526494	-0.105672	-0.802951
1	-0.141619	-0.129212	4.002360
1	0.400115	-1.402271	2.818593

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46	-0.723484	-0.206162	-0.773017
15	-2.390699	-1.608716	-0.218828
6	-2.280498	-3.335791	-0.803631
6	-2.904471	-4.394323	-0.129140
6	-1.547133	-3.606034	-1.965799
6	-2.803296	-5.694626	-0.616838
1	-3.470252	-4.198538	0.782106
6	-1.449320	-4.906499	-2.453615
1	-1.037181	-2.789640	-2.478718
6	-2.078304	-5.952159	-1.779944
1	-3.291866	-6.509741	-0.085999
1	-0.872218	-5.103962	-3.355699
1	-1.997766	-6.970351	-2.156611
6	-2.549174	-1.777161	1.594220
6	-3.620694	-1.245880	2.320762
6	-1.478266	-2.365262	2.286003
6	-3.618409	-1.298983	3.714525
1	-4.460734	-0.785271	1.801596
6	-1.484818	-2.425405	3.674819
1	-0.630803	-2.763009	1.725535
6	-2.553320	-1.885855	4.393261
1	-4.456621	-0.880555	4.269391
1	-0.651076	-2.889462	4.199059
1	-2.554109	-1.924872	5.481140
6	-4.034532	-1.014669	-0.758915

6	-5.102903	-1.867097	-1.058987
6	-4.223614	0.372281	-0.843065
6	-6.337280	-1.340311	-1.434280
1	-4.972673	-2.947663	-1.004595
6	-5.460602	0.896709	-1.206039
1	-3.384377	1.037358	-0.623693
6	-6.518891	0.039667	-1.505675
1	-7.160245	-2.012131	-1.672156
1	-5.595371	1.975326	-1.264795
1	-7.484000	0.447066	-1.801845
6	1.589624	0.977539	-2.083172
6	1.291558	-0.109864	-3.094180
1	2.463723	0.615203	-1.485082
1	1.995990	1.852895	-2.638005
8	0.548322	1.383331	-1.297062
6	0.014063	-0.509831	-3.350009
6	-1.223525	0.006526	-2.756740
1	-0.108466	-1.365898	-4.020012
6	2.452790	-0.799470	-3.674823
6	2.404032	-2.162361	-4.029692
6	3.691328	-0.141653	-3.809387
6	3.527530	-2.825453	-4.508697
1	1.476226	-2.718324	-3.892558
6	4.816199	-0.807473	-4.286233
1	3.771595	0.912690	-3.548011
6	4.743285	-2.153698	-4.640118
1	3.457626	-3.881598	-4.766135
1	5.758636	-0.268991	-4.380515
1	5.624912	-2.676181	-5.007861
6	1.354207	0.643728	1.377724
6	3.195079	-0.829309	0.618353
6	1.817651	-1.374527	0.474546
7	0.844382	-0.463408	0.902468
8	1.555945	-2.477397	0.011691
16	3.122229	0.755328	1.362997
6	4.257366	-1.510979	0.124800
6	5.655559	-1.176225	0.013252
6	6.482699	-2.080221	-0.684343
6	6.246133	-0.005550	0.527928
6	7.832136	-1.831637	-0.876774
1	6.043838	-2.991077	-1.089171
6	7.595195	0.256546	0.347153
1	5.660374	0.719558	1.087974
6	8.375622	-0.658762	-0.357426
1	8.455253	-2.535866	-1.421445
1	8.039127	1.163119	0.749543
1	3.973997	-2.474742	-0.305772
6	0.553356	1.723530	1.926184
6	1.118295	2.966525	2.250551
6	-0.822845	1.518335	2.138001
6	0.324319	3.984041	2.763109
1	2.179533	3.150672	2.084651
6	-1.610242	2.538170	2.652668
1	-1.258545	0.548762	1.900483
6	-1.040355	3.774356	2.963185
1	0.771155	4.946150	3.003937
1	-2.673243	2.367767	2.816204
1	-1.659981	4.574052	3.364652
17	10.072369	-0.327170	-0.591194
1	-1.374989	1.089227	-2.816776
1	-2.118731	-0.533099	-3.085173

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46	-0.453826	-0.387023	-0.093089
15	-1.930891	-2.048096	-0.133927
6	-1.458305	-3.485351	-1.151898
6	-1.788978	-4.799841	-0.798229
6	-0.733203	-3.254570	-2.327529
6	-1.400330	-5.861868	-1.611856
1	-2.347119	-4.992988	0.117849
6	-0.347866	-4.316924	-3.139824
1	-0.458423	-2.233534	-2.593854
6	-0.679925	-5.622591	-2.780864
1	-1.659326	-6.880477	-1.328728
1	0.221335	-4.124429	-4.047765
1	-0.372127	-6.456007	-3.409789
6	-2.092457	-2.696845	1.563664
6	-3.242309	-2.496471	2.336090
6	-0.968162	-3.303687	2.147022
6	-3.267040	-2.895471	3.671796
1	-4.122414	-2.025918	1.899229
6	-1.003768	-3.710201	3.476575
1	-0.056551	-3.429583	1.559385
6	-2.151027	-3.501453	4.243930
1	-4.166058	-2.733122	4.264031
1	-0.128174	-4.182168	3.919438
1	-2.172806	-3.810974	5.287193
6	-3.629451	-1.613979	-0.639579

6	-4.523467	-2.556005	-1.161848
6	-4.057593	-0.295044	-0.443368
6	-5.827577	-2.181326	-1.477755
1	-4.201578	-3.585017	-1.322067
6	-5.364440	0.074189	-0.750476
1	-3.353047	0.438672	-0.046556
6	-6.249735	-0.869249	-1.269577
1	-6.516276	-2.918152	-1.887148
1	-5.689200	1.100868	-0.590976
1	-7.269588	-0.580756	-1.517848
6	1.469654	1.912580	-0.755139
6	1.487379	0.986874	-1.951176
1	2.495810	2.154482	-0.441814
1	0.990172	2.869770	-1.021502
8	0.743480	1.408975	0.352371
6	0.322418	0.428286	-2.403952
6	-1.002858	0.583530	-1.820791
1	0.399356	-0.269385	-3.241410
6	2.777593	0.663107	-2.570526
6	3.018016	-0.606565	-3.133628
6	3.832857	1.595377	-2.589745
6	4.245814	-0.919543	-3.703585
1	2.240770	-1.369591	-3.080724
6	5.059630	1.281567	-3.167609
1	3.680830	2.590805	-2.174194
6	5.273131	0.025106	-3.731142
1	4.408087	-1.914660	-4.115743
1	5.854294	2.026600	-3.177535
1	6.237272	-0.223029	-4.172376
6	1.539570	0.451407	1.685060
6	3.499422	-0.839595	0.794547
6	2.180767	-1.560001	0.796680
7	1.179729	-0.825854	1.374075
8	2.041470	-2.685995	0.314405
16	3.333668	0.710747	1.588640
6	4.574901	-1.395784	0.192328
6	5.909226	-0.899231	-0.062380
6	6.761811	-1.703426	-0.845192
6	6.402963	0.345916	0.372071
6	8.034307	-1.286696	-1.203371
1	6.401436	-2.671569	-1.191128
6	7.674525	0.779173	0.022549
1	5.795302	1.000712	0.992379
6	8.476351	-0.039397	-0.769799
1	8.673738	-1.916844	-1.815629
1	8.040131	1.744854	0.361889
1	4.364229	-2.391235	-0.206323
6	0.839244	1.132017	2.801551
6	1.275265	2.374350	3.275141
6	-0.292009	0.538410	3.374741
6	0.602212	3.007335	4.312845
1	2.142208	2.856006	2.820642
6	-0.968344	1.177751	4.411252
1	-0.628618	-0.429909	3.005020
6	-0.522453	2.410133	4.884737
1	0.954621	3.970505	4.676963
1	-1.843770	0.703884	4.853175
1	-1.048129	2.906033	5.698635
17	10.073157	0.505411	-1.226094
1	-1.253111	1.577206	-1.426752
1	-1.819685	0.166643	-2.415465

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46	-1.298053	-0.349038	-0.859415
15	-3.337263	-0.119723	0.172013
6	-4.036859	-1.739613	0.643287
6	-4.954264	-1.872023	1.693931
6	-3.664480	-2.875488	-0.088108
6	-5.492962	-3.119031	2.000434
1	-5.249734	-0.995302	2.270311
6	-4.208150	-4.120122	0.218442
1	-2.938174	-2.777172	-0.896510
6	-5.122935	-4.242886	1.262670
1	-6.205682	-3.212523	2.817916
1	-3.911792	-4.996234	-0.355443
1	-5.544480	-5.216557	1.506227
6	-3.394733	0.856204	1.712910
6	-4.392797	1.805165	1.964993
6	-2.396277	0.633195	2.672211
6	-4.394927	2.518921	3.161608
1	-5.175965	1.985342	1.229560
6	-2.409623	1.342820	3.870049
1	-1.591407	-0.077314	2.467280
6	-3.405975	2.288456	4.115427
1	-5.173993	3.256334	3.347027
1	-1.628228	1.168302	4.608114
1	-3.406691	2.850247	5.048071
6	-4.590315	0.653243	-0.907330

6	-5.893860	0.162756	-1.036560
6	-4.210431	1.791182	-1.634475
6	-6.803018	0.802018	-1.878059
1	-6.204157	-0.719619	-0.477810
6	-5.123536	2.433088	-2.464729
1	-3.190621	2.172705	-1.545655
6	-6.421471	1.936582	-2.590052
1	-7.814216	0.410442	-1.974474
1	-4.820007	3.317856	-3.021414
1	-7.133485	2.433296	-3.246756
6	0.713933	0.750214	-2.615251
6	0.464860	-0.678583	-2.173922
1	1.787899	0.926255	-2.748155
1	0.218919	0.945205	-3.571784
8	0.199220	1.806007	-1.779513
6	-0.672971	-1.424365	-2.601517
6	-1.938569	-0.842799	-2.830512
1	-0.625057	-2.508390	-2.481543
6	1.594487	-1.467381	-1.614793
6	1.329328	-2.541848	-0.746547
6	2.934800	-1.211711	-1.948443
6	2.353124	-3.337134	-0.246516
1	0.298531	-2.722579	-0.435053
6	3.960927	-2.008645	-1.448271
1	3.190784	-0.399616	-2.625395
6	3.677295	-3.074932	-0.597187
1	2.117156	-4.154920	0.432646
1	4.992191	-1.787597	-1.721513
1	4.483444	-3.690792	-0.201368
6	0.542335	1.885169	-0.414991
6	2.379372	0.628863	0.972503
6	0.957382	0.159552	1.160292
7	0.073143	0.793667	0.361247
8	0.674222	-0.754625	1.948207
16	2.467713	1.928646	-0.182696
6	3.379593	-0.036397	1.599380
6	4.816958	0.075865	1.474795
6	5.609552	-0.949213	2.031725
6	5.484881	1.115569	0.799376
6	6.990060	-0.961235	1.902913
1	5.118087	-1.764003	2.562723
6	6.867414	1.120774	0.662600
1	4.927291	1.952810	0.386062
6	7.607900	0.077841	1.210328
1	7.581245	-1.765807	2.333066
1	7.365783	1.932432	0.138841
1	3.021161	-0.836576	2.250276
6	0.010563	3.232889	0.044089
6	0.051883	4.342056	-0.807996
6	-0.493369	3.388895	1.337389
6	-0.416131	5.579915	-0.375707
1	0.452046	4.230825	-1.813836
6	-0.960808	4.628572	1.768442
1	-0.524553	2.528465	2.003312
6	-0.927908	5.727589	0.913079
1	-0.381793	6.434128	-1.050242
1	-1.352335	4.734140	2.779338
1	-1.294968	6.695672	1.249674
17	9.350056	0.075436	1.032897
1	-2.033949	0.167515	-3.237598
1	-2.786555	-1.498132	-3.029186

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6	0.432433	7.380470	0.526751
6	2.567559	5.832207	0.598328
6	1.251383	5.194257	0.951706
7	0.167149	6.014355	0.771216
8	1.162535	4.031719	1.347071
16	2.357360	7.479130	0.077096
6	3.694445	5.082649	0.695460
6	5.075353	5.380553	0.388670
6	6.024544	4.355795	0.584351
6	5.547252	6.616837	-0.095027
6	7.371554	4.541434	0.314992
1	5.685794	3.389841	0.956988
6	6.892911	6.819774	-0.371051
1	4.860862	7.444319	-0.259617
6	7.794058	5.779209	-0.163995
1	8.086446	3.737863	0.471939
1	7.239606	7.780152	-0.743871
1	3.507276	4.071480	1.061920
17	9.490530	6.029762	-0.513266
6	-1.024458	5.549223	-0.767667
6	0.208350	8.308636	1.693916
6	-0.158406	9.642059	1.488964
6	0.405720	7.845544	2.998449
6	-0.327397	10.496020	2.577662
1	-0.309618	10.012300	0.477073

6	0.243505	8.702205	4.082709
1	0.681491	6.804449	3.166586
6	-0.126922	10.030984	3.876137
1	-0.618657	11.531424	2.407214
1	0.399904	8.323580	5.092286
1	-0.261170	10.700552	4.724190
8	-0.319448	7.825768	-0.558795
6	-0.457874	6.757998	-1.479869
1	0.522959	6.545371	-1.927456
1	-1.140836	7.110990	-2.258946
6	-2.381272	5.622389	-0.248073
6	-0.598997	4.205352	-1.208058
6	-1.034275	3.076175	-0.489885
6	0.239721	4.004688	-2.315571
6	-0.666818	1.795930	-0.878468
1	-1.644616	3.217384	0.403694
6	0.601377	2.719548	-2.708385
1	0.597057	4.848356	-2.900837
6	0.150884	1.612218	-1.993557
1	-1.008403	0.937800	-0.302735
1	1.238519	2.585946	-3.580456
1	0.440330	0.608604	-2.300067
1	-2.996155	4.745625	-0.449933
6	-3.006757	6.717986	0.367960
1	-4.094458	6.721326	0.445045
1	-2.537822	7.702034	0.406755
46	-2.145281	5.547748	1.944975
15	-2.900770	5.943410	4.030183
6	-3.901681	7.474086	4.162647
6	-5.052758	7.571225	4.953166
6	-3.465026	8.603092	3.455193
6	-5.751870	8.774451	5.034226
1	-5.400557	6.705878	5.517496
6	-4.155360	9.808286	3.549216
1	-2.573616	8.529459	2.826537
6	-5.304176	9.894180	4.335680
1	-6.647376	8.836371	5.650396
1	-3.799069	10.679049	3.000147
1	-5.851287	10.833145	4.401750
6	-4.038912	4.635634	4.636256
6	-4.050433	4.180088	5.960003
6	-4.943462	4.077851	3.719998
6	-4.946369	3.188890	6.357497
1	-3.359255	4.602672	6.688460
6	-5.845640	3.097343	4.121163
1	-4.929572	4.420193	2.683038
6	-5.846134	2.647888	5.441807
1	-4.942498	2.842507	7.389678
1	-6.544506	2.677257	3.399767
1	-6.544969	1.874165	5.755230
6	-1.707880	6.128477	5.415301
6	-1.912860	7.003564	6.488747
6	-0.530814	5.368470	5.375707
6	-0.960280	7.117783	7.499344
1	-2.820596	7.604829	6.535346
6	0.417639	5.476496	6.389460
1	-0.353892	4.696911	4.531958
6	0.205850	6.355682	7.451696
1	-1.129500	7.806728	8.325481
1	1.328204	4.881258	6.345311
1	0.952322	6.450113	8.238497

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6	-2.689954	-2.164082	-2.707086
6	-0.745763	-3.697699	-1.848244
6	-2.106406	-4.155713	-1.437863
7	-3.102107	-3.334494	-1.946143
8	-2.301195	-5.128265	-0.722971
16	-0.819760	-2.423338	-3.037962
6	0.332245	-4.342635	-1.338935
6	1.747158	-4.184389	-1.589204
6	2.626661	-5.098063	-0.972770
6	2.314251	-3.186025	-2.406128
6	3.998006	-5.037747	-1.164976
1	2.213838	-5.875331	-0.330953
6	3.685780	-3.107867	-2.604600
1	1.687148	-2.441042	-2.889862
6	4.515904	-4.038607	-1.985919
1	4.658419	-5.755993	-0.686039
1	4.106655	-2.330897	-3.237705
1	0.066669	-5.137094	-0.639164
17	6.242576	-3.952953	-2.246397
6	-4.412229	-3.794979	-2.556871
6	-2.882906	-0.839195	-2.004259
6	-3.052123	0.340263	-2.784711
6	-2.539647	-0.685997	-0.619554
6	-2.891771	1.592084	-2.224108
1	-3.308878	0.239376	-3.837865

6	-2.334588	0.612499	-0.088532
1	-2.179776	-1.546527	-0.052021
6	-2.516731	1.735672	-0.870510
1	-3.038365	2.477316	-2.841364
1	-2.029913	0.706950	0.953876
1	-2.366668	2.728016	-0.449147
8	-3.413236	-2.179836	-3.900097
6	-4.058647	-3.449103	-4.004660
1	-3.362120	-4.185949	-4.430066
1	-4.920362	-3.325969	-4.665590
6	-5.575605	-2.943181	-2.029287
6	-4.751195	-5.251086	-2.309243
6	-5.110407	-5.671114	-1.019758
6	-4.820740	-6.173381	-3.355591
6	-5.510344	-6.978514	-0.782146
1	-5.052087	-4.965743	-0.190602
6	-5.228836	-7.487161	-3.118827
1	-4.569826	-5.879593	-4.372461
6	-5.573384	-7.893480	-1.834886
1	-5.774173	-7.286621	0.228178
1	-5.280601	-8.189220	-3.949090
1	-5.892195	-8.918052	-1.651008
1	-6.166454	-3.427097	-1.251808
6	-6.084732	-1.819745	-2.617748
1	-7.047837	-1.425227	-2.295306
1	-5.648011	-1.374114	-3.509163
46	-4.711221	-1.239262	-0.766061
15	-5.881310	-1.104463	1.235628
6	-6.812152	-2.610089	1.718227
6	-6.509167	-3.378640	2.847952
6	-7.803609	-3.073133	0.835973
6	-7.174186	-4.580703	3.087152
1	-5.751093	-3.038672	3.552081
6	-8.474268	-4.266833	1.082615
1	-8.052102	-2.487611	-0.051720
6	-8.156205	-5.029187	2.207703
1	-6.925005	-5.164484	3.971955
1	-9.242433	-4.607838	0.390096
1	-8.674666	-5.967722	2.396716
6	-4.963443	-0.646276	2.755993
6	-5.305052	0.446614	3.561175
6	-3.807269	-1.379614	3.071292
6	-4.515684	0.793870	4.656896
1	-6.192369	1.035708	3.333900
6	-3.032814	-1.045548	4.177710
1	-3.515485	-2.221218	2.439063
6	-3.382739	0.047843	4.971387
1	-4.792903	1.650909	5.268693
1	-2.146952	-1.632562	4.414703
1	-2.770092	0.318158	5.829576
6	-7.189315	0.170788	1.102501
6	-8.328547	0.188854	1.918371
6	-7.026627	1.175105	0.138851
6	-9.283965	1.191326	1.770277
1	-8.464848	-0.583987	2.675389
6	-7.979940	2.180789	-0.005520
1	-6.144041	1.151089	-0.506842
6	-9.110541	2.187937	0.809567
1	-10.166150	1.196192	2.408228
1	-7.843259	2.954318	-0.759154
1	-9.860560	2.968524	0.694299

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46	-0.463262	-1.627197	-4.229911
15	-1.672862	-1.795137	-6.190189
6	-2.908200	-3.134354	-6.124569
6	-3.999673	-3.195549	-7.001661
6	-2.749397	-4.132498	-5.154819
6	-4.911564	-4.243612	-6.908605
1	-4.137736	-2.419849	-7.754840
6	-3.661576	-5.180573	-5.066138
1	-1.907968	-4.073017	-4.461073
6	-4.744372	-5.234788	-5.941730
1	-5.758299	-4.283793	-7.591415
1	-3.532246	-5.948828	-4.306274
1	-5.464227	-6.047925	-5.867515
6	-2.621212	-0.330788	-6.722186
6	-2.272563	0.427561	-7.844941
6	-3.709877	0.070852	-5.932984
6	-3.006347	1.566402	-8.175081
1	-1.430405	0.128216	-8.467992
6	-4.442819	1.202905	-6.270759
1	-3.990021	-0.513349	-5.055598
6	-4.090959	1.954572	-7.392571
1	-2.729813	2.147738	-9.052825
1	-5.290700	1.499947	-5.656275
1	-4.663665	2.842043	-7.655167
6	-0.549727	-2.180756	-7.572972

6	-0.932816	-2.918832	-8.699322
6	0.763081	-1.697360	-7.480121
6	-0.014738	-3.160999	-9.717801
1	-1.948671	-3.305031	-8.780714
6	1.676025	-1.934007	-8.503917
1	1.062443	-1.129290	-6.595394
6	1.286724	-2.668609	-9.622750
1	-0.316518	-3.737584	-10.590181
1	2.692149	-1.552301	-8.424417
1	2.000474	-2.861273	-10.421443
6	0.889169	0.246735	-2.434543
6	0.526620	-1.212324	-2.188401
1	1.944084	0.405324	-2.170885
1	0.783429	0.513251	-3.497568
8	0.090137	1.186079	-1.745875
6	-0.807699	-1.648416	-2.106735
6	-1.833632	-0.948339	-2.791469
1	-1.013120	-2.659243	-1.754582
6	1.631258	-2.142921	-1.904920
6	1.479041	-3.216161	-1.011475
6	2.884189	-1.959110	-2.521088
6	2.543699	-4.065214	-0.734676
1	0.535955	-3.353199	-0.486746
6	3.942317	-2.820770	-2.254792
1	3.024555	-1.142942	-3.229779
6	3.778101	-3.872782	-1.354258
1	2.413457	-4.871759	-0.015371
1	4.901627	-2.664131	-2.744938
1	4.611602	-4.536181	-1.130337
6	0.356772	1.279477	-0.346002
6	2.713931	0.502197	0.523512
6	1.497367	-0.370281	0.845865
7	0.349339	0.081789	0.325210
8	1.641277	-1.408983	1.507246
16	2.237440	2.021611	-0.157964
6	3.945370	-0.021947	0.738912
6	5.268221	0.483166	0.442420
6	6.351969	-0.414849	0.541142
6	5.559081	1.803718	0.045692
6	7.652043	-0.036580	0.241184
1	6.156331	-1.440210	0.855088
6	6.856129	2.200926	-0.255859
1	4.763685	2.543651	-0.016327
6	7.891266	1.275247	-0.161087
1	8.470060	-0.748847	0.318280
1	7.062410	3.225322	-0.557077
1	3.911367	-1.026238	1.167796
6	-0.568696	2.350266	0.176501
6	-0.853625	3.490094	-0.583823
6	-1.134175	2.223427	1.447456
6	-1.694657	4.479612	-0.081916
1	-0.410192	3.598974	-1.571987
6	-1.974869	3.213669	1.948881
1	-0.912033	1.333649	2.033417
6	-2.260394	4.344240	1.185897
1	-1.910609	5.361010	-0.684047
1	-2.411953	3.098989	2.939708
1	-2.919984	5.117480	1.576660
17	9.526581	1.769334	-0.555166
1	-1.800789	0.137007	-2.891700
1	-2.827879	-1.393153	-2.829658

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6	-1.162555	-0.818627	-1.543881
6	-3.104527	0.127754	-0.021331
6	-1.725899	0.727885	0.153378
7	-0.789196	0.241210	-0.706339
8	-1.507256	1.616413	0.979680
16	-3.132281	-1.031812	-1.312655
6	-4.102356	0.563555	0.787804
6	-5.506897	0.224343	0.847764
6	-6.292894	0.853739	1.835929
6	-6.155434	-0.686046	-0.010165
6	-7.648681	0.597272	1.970881
1	-5.817731	1.562762	2.512944
6	-7.513123	-0.952525	0.108614
1	-5.598545	-1.201890	-0.788907
6	-8.248878	-0.308130	1.099205
1	-8.233716	1.092586	2.741713
1	-7.995630	-1.657572	-0.563593
1	-3.768334	1.304103	1.517328
17	-9.960411	-0.643859	1.252200
6	-0.259145	1.678857	-2.168349
6	-0.552455	-2.160882	-1.224327
6	-0.393872	-3.129261	-2.220414
6	-0.175839	-2.459886	0.087721
6	0.140455	-4.376335	-1.906064
1	-0.689276	-2.904004	-3.242844

6	0.354089	-3.708146	0.399463
1	-0.296628	-1.706560	0.864514
6	0.515396	-4.670618	-0.596445
1	0.263897	-5.121919	-2.689858
1	0.645587	-3.928579	1.425031
1	0.932107	-5.646388	-0.352330
8	-0.895969	-0.519373	-2.885395
6	-1.104366	0.861372	-3.120810
1	-2.171750	1.095634	-3.024186
1	-0.817884	1.038114	-4.163123
6	1.183017	1.499168	-2.225344
6	-0.784434	2.951644	-1.635747
6	0.098562	3.942637	-1.143989
6	-2.161134	3.254641	-1.650511
6	-0.375016	5.180726	-0.721164
1	1.165695	3.740929	-1.069506
6	-2.627137	4.489744	-1.220850
1	-2.886781	2.516689	-1.984284
6	-1.738348	5.461982	-0.760875
1	0.329913	5.923841	-0.353056
1	-3.696339	4.692314	-1.238536
1	-2.108986	6.428893	-0.425863
6	1.828238	1.038575	-3.375045
46	1.083621	3.104445	-3.611231
15	0.957810	4.656997	-5.313883
6	-0.781510	5.233020	-5.302742
6	-1.162219	6.479671	-4.793791
6	-1.778354	4.334757	-5.717874
6	-2.511416	6.825479	-4.713971
1	-0.405889	7.189822	-4.460119
6	-3.121695	4.685031	-5.641761
1	-1.494514	3.354612	-6.104982
6	-3.492355	5.933627	-5.138875
1	-2.793453	7.800892	-4.320725
1	-3.882422	3.981453	-5.976081
1	-4.544106	6.207046	-5.077706
6	1.930906	6.179612	-5.036536
6	2.107912	7.165384	-6.015383
6	2.483504	6.371618	-3.763839
6	2.825476	8.321777	-5.722486
1	1.681494	7.028972	-7.009431
6	3.196257	7.531576	-3.470090
1	2.350454	5.595045	-3.006050
6	3.369392	8.506266	-4.451004
1	2.960498	9.082488	-6.489373
1	3.622585	7.670464	-2.478215
1	3.932076	9.410667	-4.226320
6	1.266329	4.205237	-7.057906
6	0.598899	4.813984	-8.129589
6	2.227545	3.221031	-7.321894
6	0.896977	4.448624	-9.440042
1	-0.158668	5.573959	-7.937772
6	2.528571	2.862051	-8.633367
1	2.735956	2.732043	-6.489289
6	1.863087	3.475475	-9.693431
1	0.373549	4.926985	-10.265960
1	3.277633	2.096117	-8.825879
1	2.092934	3.190873	-10.718630
1	2.909594	0.915292	-3.358616
1	1.306677	0.483418	-4.152520
1	1.773395	1.787895	-1.356553

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6	-1.714477	0.059593	-1.909253
6	-3.643128	0.391328	-0.161455
6	-2.550444	1.402100	-0.064396
7	-1.532672	1.149327	-0.970959
8	-2.556279	2.320231	0.741292
16	-3.452719	-0.637568	-1.555500
6	-4.623242	0.419371	0.772522
6	-5.807731	-0.386444	0.958936
6	-6.628145	-0.073673	2.061805
6	-6.198453	-1.463863	0.140002
6	-7.778574	-0.791411	2.346073
1	-6.346452	0.756113	2.708651
6	-7.346873	-2.195771	0.412486
1	-5.602428	-1.752116	-0.723079
6	-8.126733	-1.852941	1.514460
1	-8.396679	-0.533825	3.201845
1	-7.633085	-3.028171	-0.225266
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6	-0.773699	2.211200	-1.734090
6	-0.723125	-1.072667	-1.768602
6	-0.371090	-1.837183	-2.883840
6	-0.162810	-1.367977	-0.523791
6	0.547949	-2.875303	-2.755394
1	-0.804963	-1.607525	-3.854985

6	0.761761	-2.401121	-0.401165	1	2.007141	5.890548	-0.961470
1	-0.439215	-0.774784	0.346819	6	4.571955	8.066125	-0.427083
6	1.121926	-3.156234	-1.516545	1	6.109805	8.534854	-1.864041
1	0.821365	-3.462402	-3.630342	1	2.918075	7.399045	0.793816
1	1.204856	-2.614308	0.570062	1	4.983711	8.717390	0.342108
1	1.847157	-3.962119	-1.419805	6	4.068555	4.914677	-4.811641
8	-1.626086	0.612228	-3.195705	6	4.390371	5.695218	-5.928406
6	-1.503715	2.029499	-3.064060	6	4.839130	3.778872	-4.528876
1	-2.500531	2.492964	-3.027415	6	5.469196	5.345871	-6.740146
1	-0.961017	2.398064	-3.940471	1	3.799728	6.581944	-6.161332
6	0.692985	1.815084	-1.798487	6	5.923944	3.439797	-5.330819
6	-0.834015	3.617281	-1.158461	1	4.573087	3.158246	-3.670302
6	-0.233146	3.900460	0.078970	6	6.239287	4.223194	-6.440668
6	-1.357199	4.680033	-1.903947	1	5.711279	5.957120	-7.608043
6	-0.195681	5.198682	0.570603	1	6.517343	2.557802	-5.095796
1	0.182042	3.085989	0.670504	1	7.082467	3.955811	-7.075225
6	-1.306686	5.987761	-1.415115	6	1.618325	6.454731	-4.561149
1	-1.800475	4.502996	-2.882571	6	1.729581	7.848525	-4.486064
6	-0.734735	6.250566	-0.174840	6	0.580046	5.900715	-5.326159
1	0.262799	5.393710	1.539099	6	0.821401	8.667910	-5.154797
1	-1.714235	6.798817	-2.017427	1	2.527681	8.302470	-3.899184
1	-0.696258	7.269146	0.208245	6	-0.319851	6.719418	-6.001560
6	1.391249	1.420458	-2.934108	1	0.473340	4.815116	-5.378564
46	1.642662	3.557829	-2.628718	6	-0.204565	8.106740	-5.911772
15	2.711827	5.300343	-3.642293	1	0.917444	9.749935	-5.081523
6	3.519556	6.392152	-2.410723	1	-1.120671	6.273466	-6.589234
6	4.680746	7.133684	-2.655300	1	-0.916546	8.748559	-6.427980
6	2.900835	6.489625	-1.157181	1	2.356505	0.927094	-2.817566
6	5.204697	7.963112	-1.665023	1	0.897426	1.248971	-3.890694
1	5.175300	7.068200	-3.624702	1	1.141685	1.647605	-0.816504
6	3.415006	7.328917	-0.173340				

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