Electronic Supplementary Material (ESI) for Molecular Systems Design & Engineering.

Supporting Information

Machine learning predictions of diffusion in bulk and confined ionic liquids using simple descriptors

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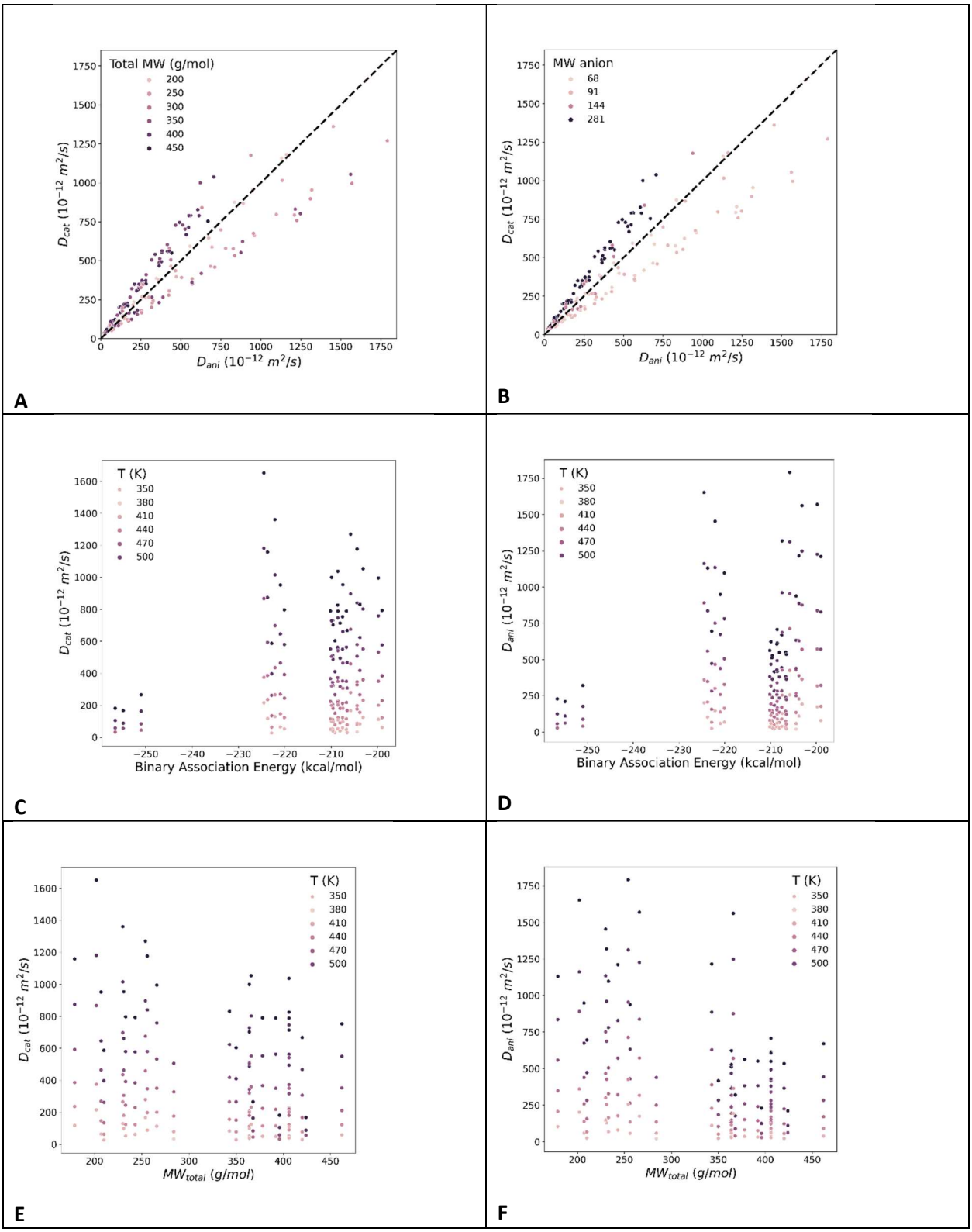
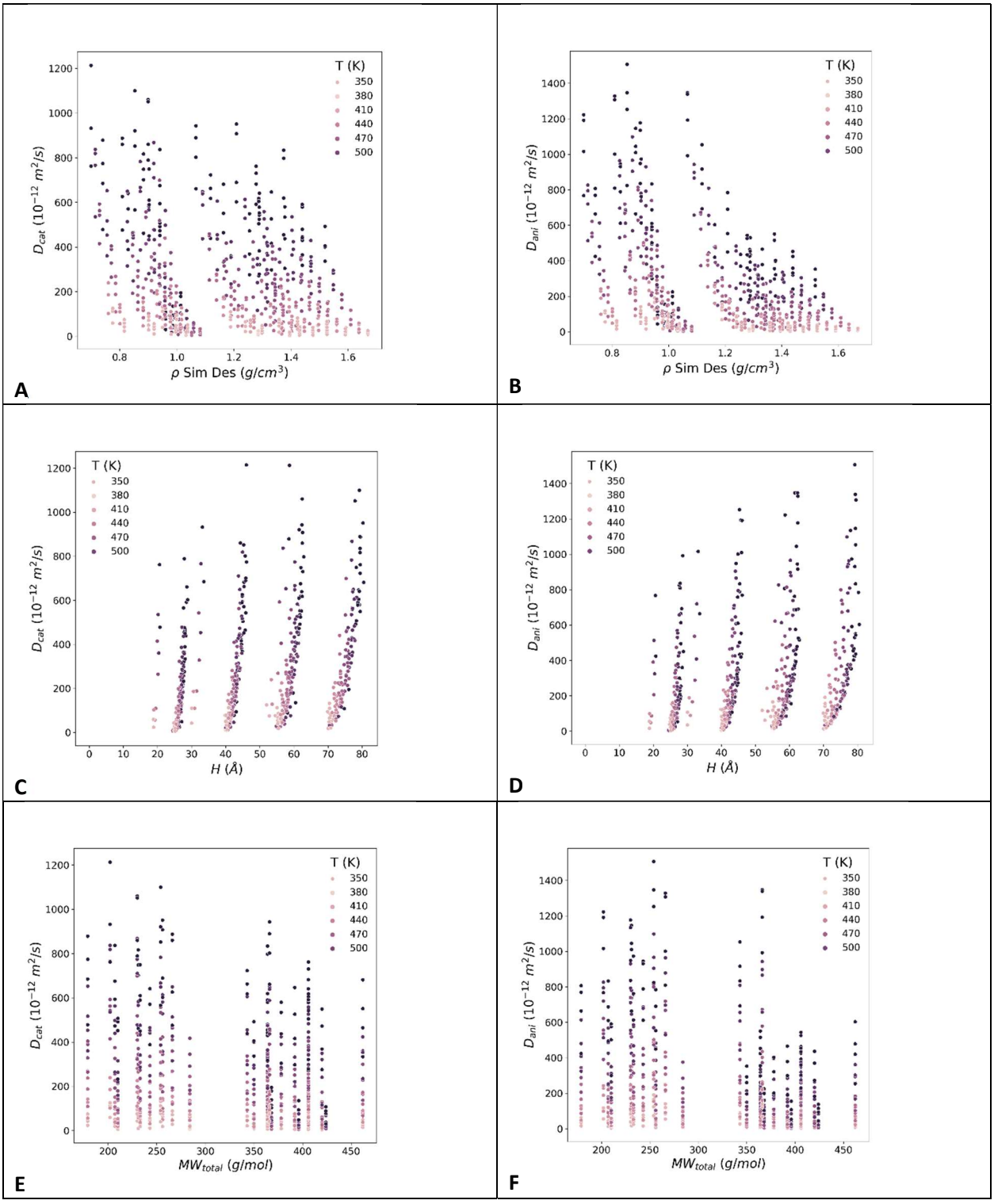
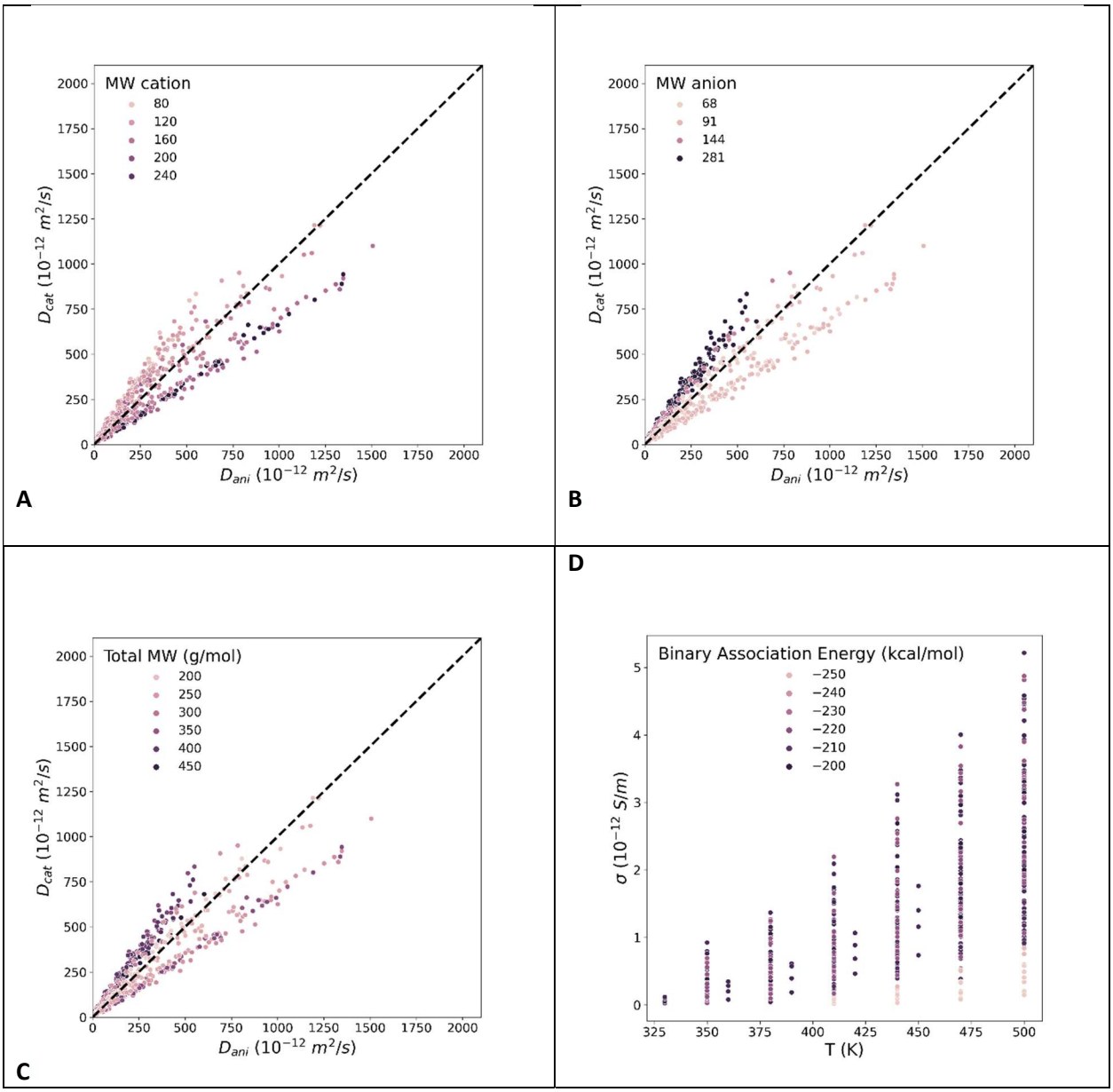


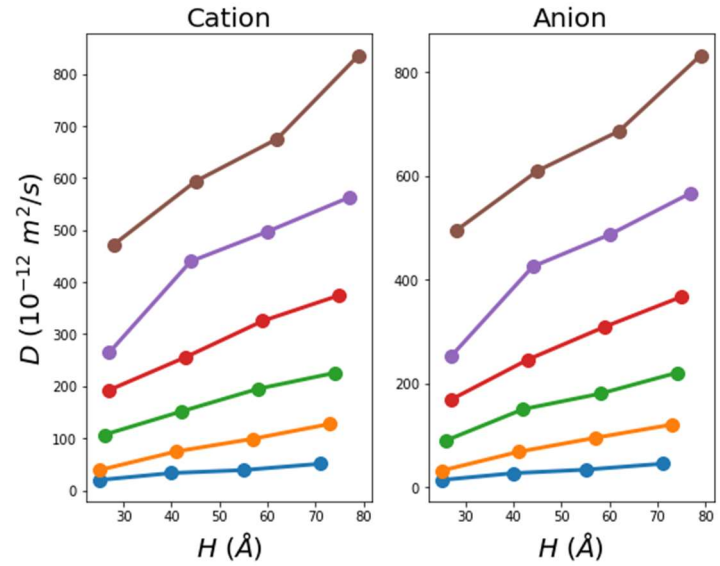
Supporting Figure 1: Correlation between D_{cat} and D_{ani} for bulk ILs: ion molecular weight (MW) for A) cation and B) anion, binary association energy for C) cations and D) anions, ion pair molecular weight for E) cations and F) anions.



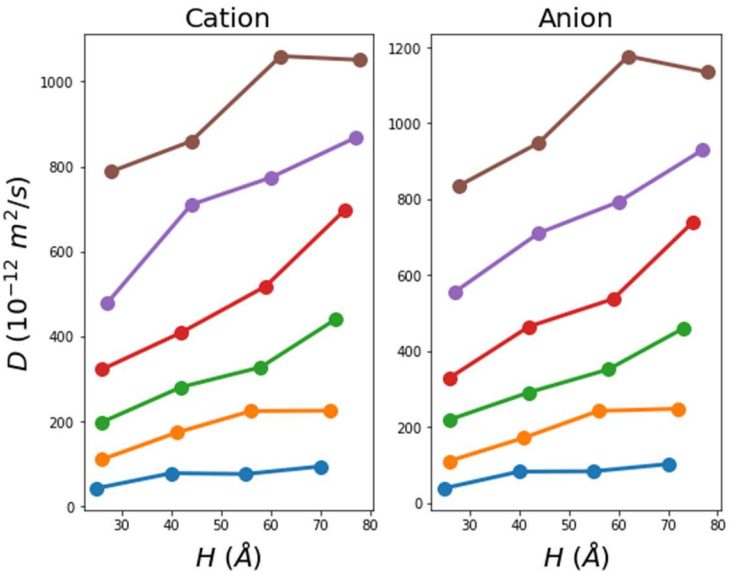
Supporting Figure 2: Correlations of D_{cat} and D_{ani} in confined ILs with fluid density (A, B), slit pore height (C, D), and IL molecular weight (E, F)



Supporting Figure 3: MD results for IL diffusion in slit pores. A) Dcat vs Dani, color cation molecular weight, B) Dcat vs Dani, color anion molecular weight, C) Dcat vs Dani, color total IL molecular weight, D) D vs temperature with color as binary association energy

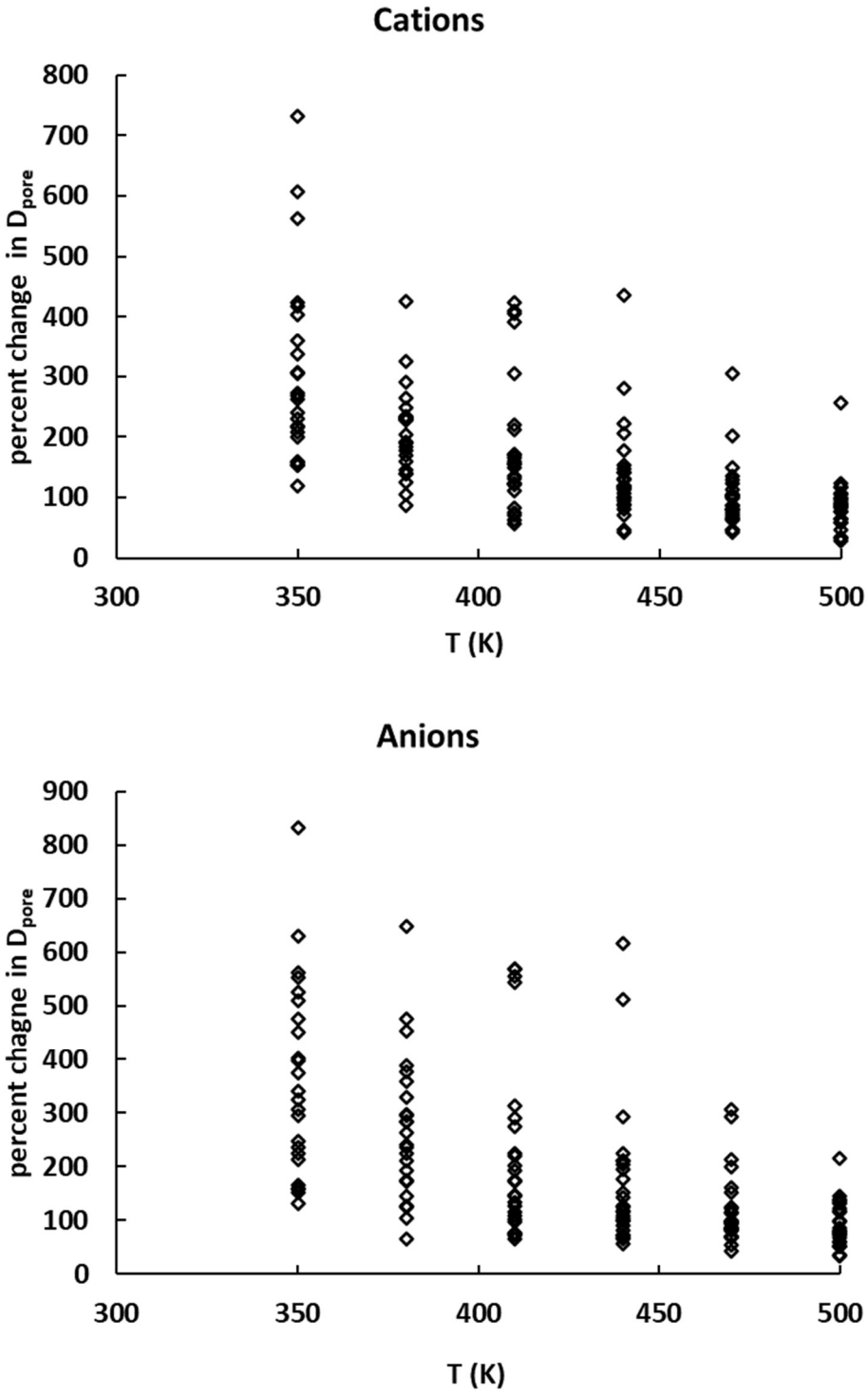


A

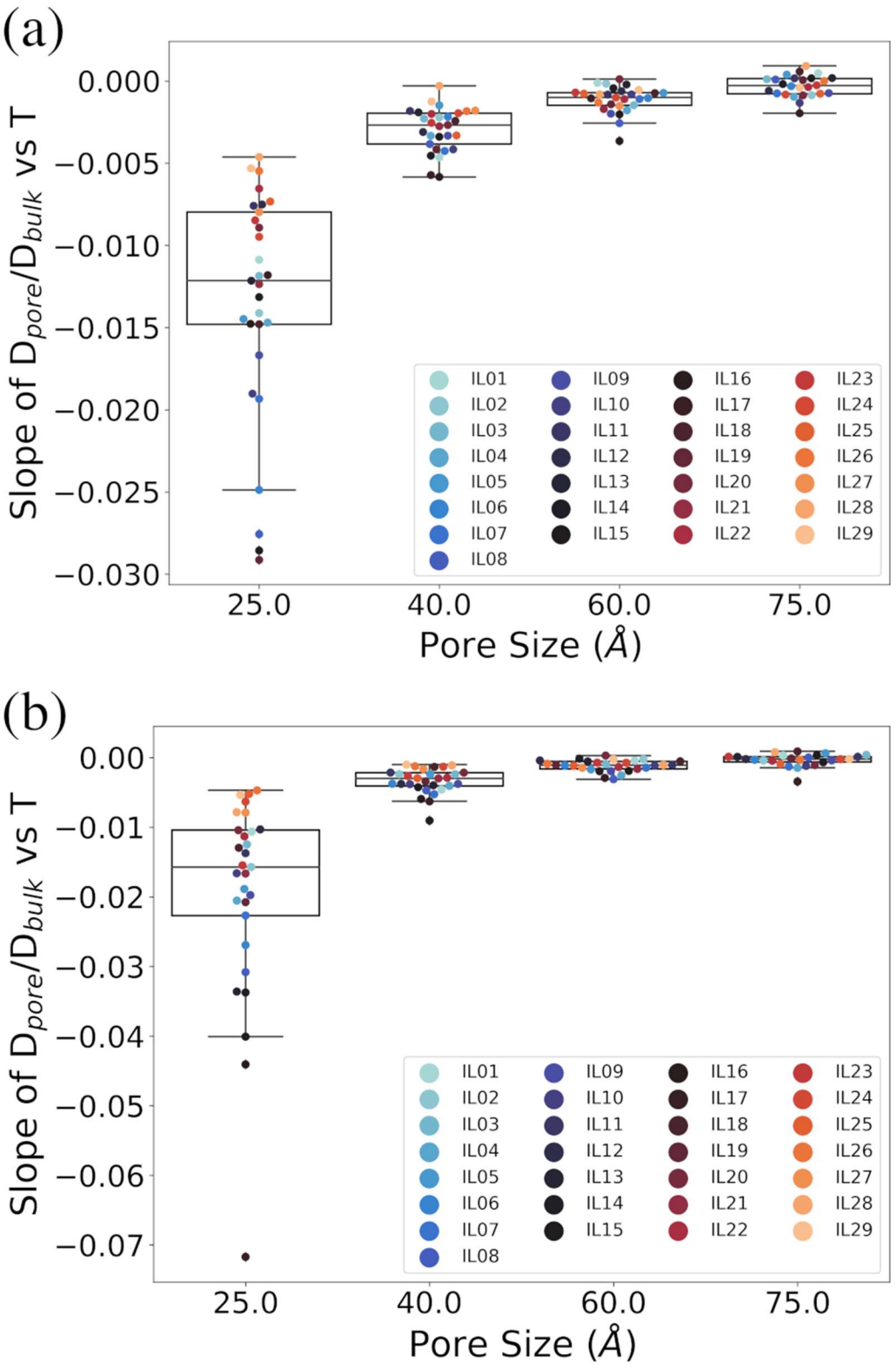


B

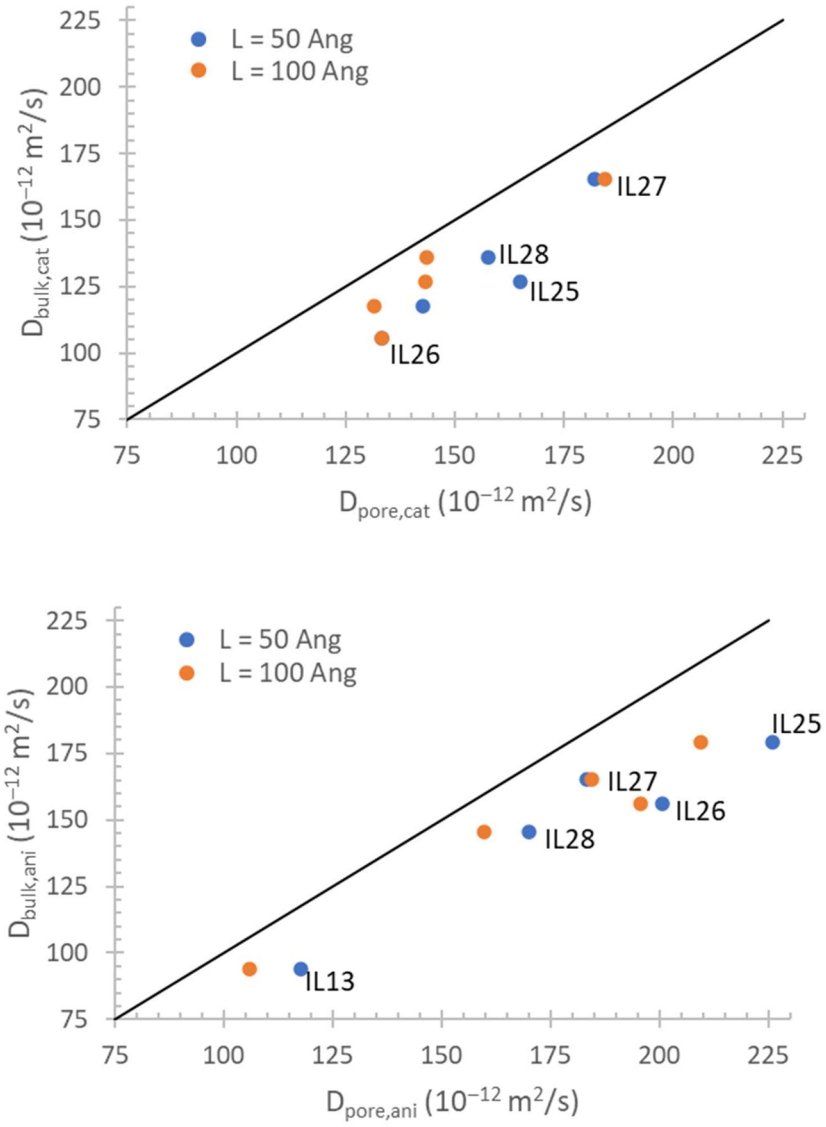
Supporting Figure 4: Results from MD simulations of A) IL22 and B) IL28 confined in graphite slit pores, showing trends of cation and anion diffusion with slit pore height (H) and temperature (colors, blue 350 K, orange 380 K, green 410 K, red 440 K, purple 470 K, brown 500 K)



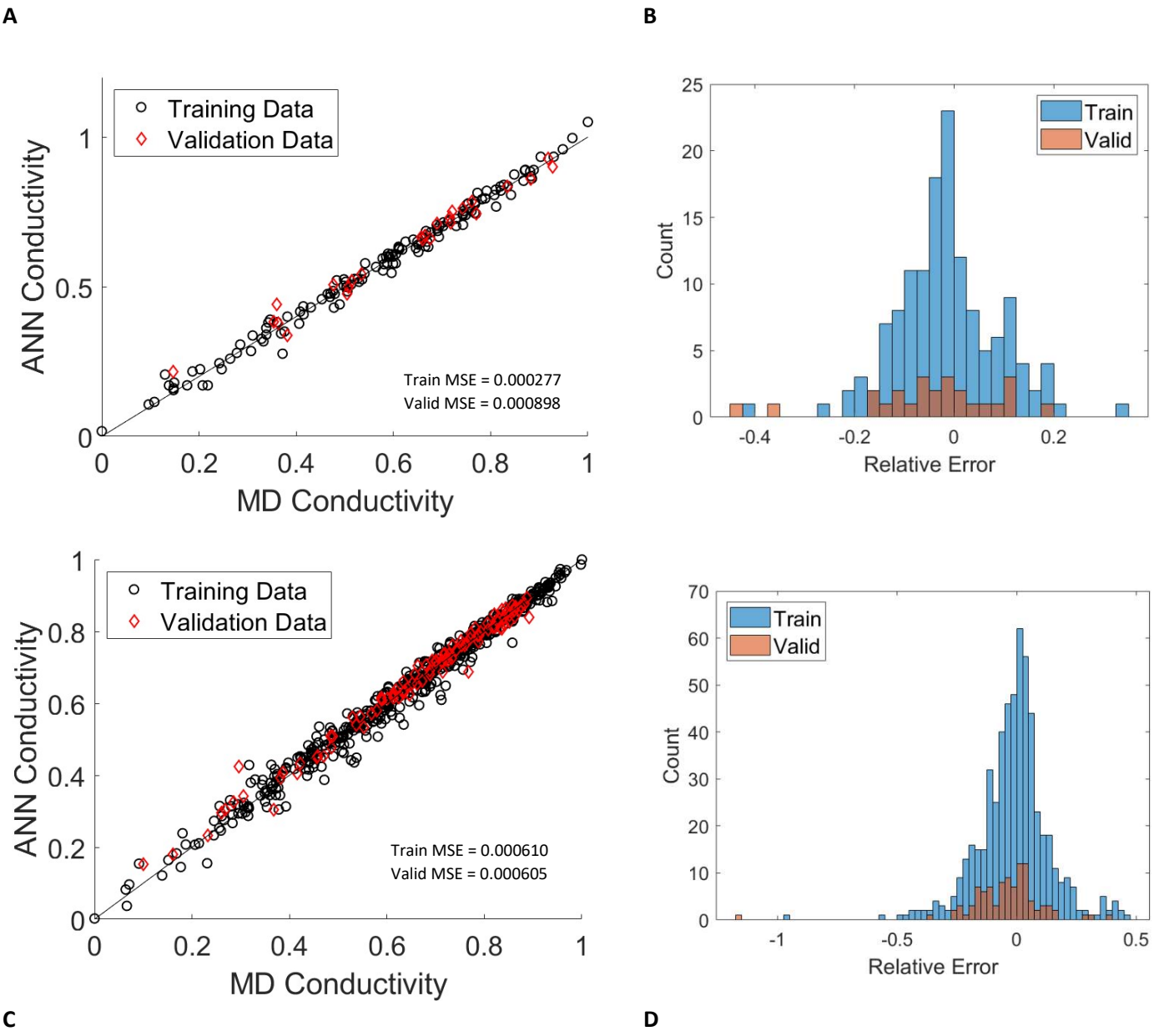
Supporting Figure 5: Percent change in $D_{slit\ pore}$ values between small slit pore (~25 Å) and large slit pore (~75 Å) at each temperature for cations and anions



Supporting Figure 6: The slope of D_pore / D_bulk versus temperature for each ionic liquid ((a) cation, (b) anion) at each pore size. Box plots are shown to indicate the distribution of slopes across all ionic liquids for each pore size.



Supporting Figure 7: Parity plots showing cation (top) and anion (bottom) diffusion coefficients for bulk and slit pore fluids with lateral periodic system sizes of 50 Å and 100 Å



Supporting Figure 8: A) parity plot of conductivity (sigma) predicted from ANN vs computed from diffusion coefficients from MD simulations using SMILES descriptors for bulk ILs and C) ILs confined in slit pores. B) Distribution of relative errors for bulk ILs, D) distribution of relative errors for confined ILs

Supporting Table 1: Composition of ionic liquids, MD run times, and temperatures

IL	cation	anion	MD run times and temperatures
1	imidazolium	[Tf2N]	20 ns (440 K, 470 K, 500 K) 40 ns (350 K, 380 K, 410 K)
2	1-methylimidazolium	[Tf2N]	20 ns (440 K, 470 K, 500 K) 40 ns (350 K, 380 K, 410 K)
3	4-methylimidazolium	[Tf2N]	20 ns (440 K, 470 K, 500 K) 40 ns (350 K, 380 K, 410 K)
4	1,3-dimethylimidazolium	[Tf2N]	20 ns (440 K, 470 K, 500 K) 40 ns (350 K, 380 K, 410 K)
5	1,2-dimethylimidazolium	[Tf2N]	20 ns (440 K, 470 K, 500 K) 40 ns (350 K, 380 K, 410 K)
6	1,2,3-trimethylimidazolium	[Tf2N]	20 ns (440 K, 470 K, 500 K) 40 ns (350 K, 380 K, 410 K)
7	1,3,4,5-tetramethylimidazolium	[Tf2N]	20 ns (440 K, 470 K, 500 K) 40 ns (350 K, 380 K, 410 K)
8	1,2,3,4-tetramethylimidazolium	[Tf2N]	20 ns (440 K, 470 K, 500 K) 40 ns (350 K, 380 K, 410 K)
9	1,2,4,5-tetramethylimidazolium	[Tf2N]	20 ns (440 K, 470 K, 500 K) 40 ns (350 K, 380 K, 410 K)
10	1,2,3,4,5-pentamethylimidazolium	[Tf2N]	20 ns (440 K, 470 K, 500 K) 40 ns (350 K, 380 K, 410 K)
11	1,3-diethylimidazolium	[Tf2N]	20 ns (440 K, 470 K, 500 K) 40 ns (350 K, 380 K, 410 K)
12	1,3-n-dibutylimidazolium	[Tf2N]	20 ns (440 K, 470 K, 500 K) 40 ns (350 K, 380 K, 410 K)
13	1-ethyl-3-methylimidazolium	[PF6]	20 ns (440 K, 470 K, 500 K) 40 ns (350 K, 380 K, 410 K)
14	1-n-butyl-3-methylimidazolium	[PF6]	20 ns (420 K, 450 K) 40 ns (330 K, 360 K, 390 K)
15	1-n-decyl-3-methylimidazolium	[PF6]	20 ns (470 K, 500 K) 40 ns (410 K, 440 K)
16	1-n-dodecyl-3-methylimidazolium	[PF6]	20 ns (500 K) 40 ns (410 K, 440 K, 470 K)
17	1-n-tetradecyl-3-methylimidazolium	[PF6]	40 ns (440 K, 470 K, 500 K)

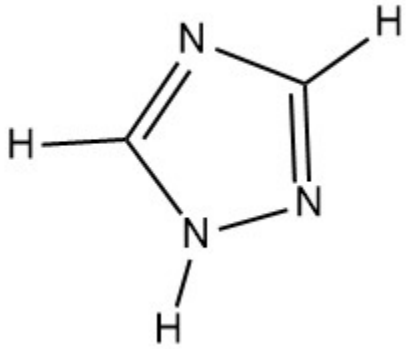
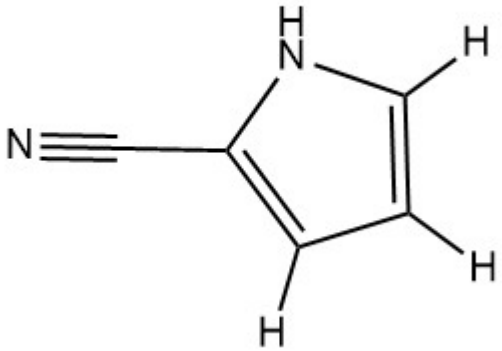
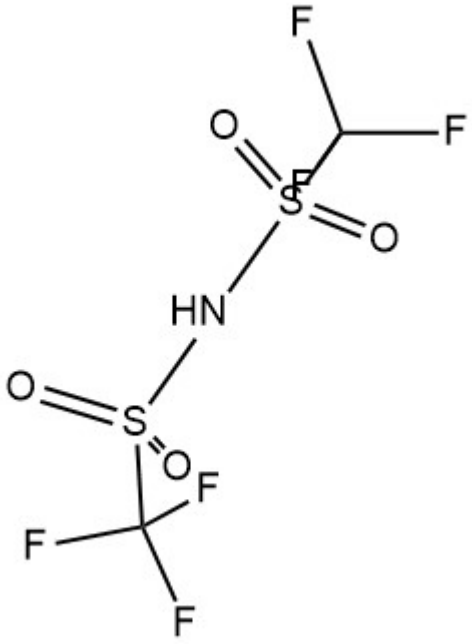
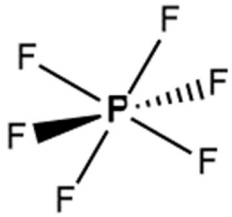
[Tf2N] bis(trifluoromethanesulfonyl)imide
[PF6] hexafluorophosphate

Supporting Table 1 (continued): Composition of ionic liquids, MD run times, and temperatures

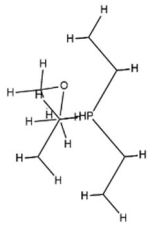
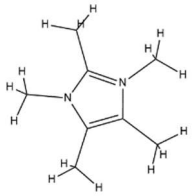
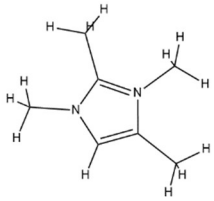
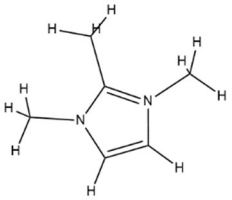
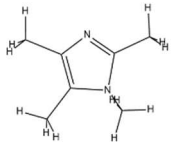
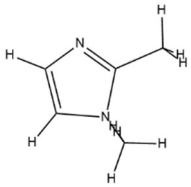
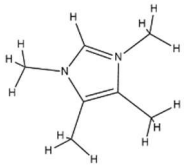
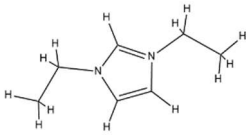
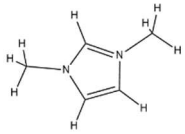
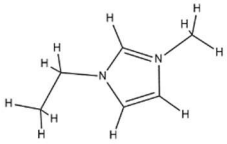
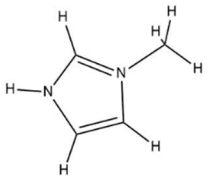
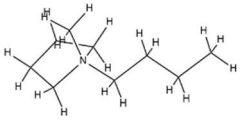
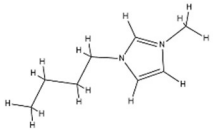
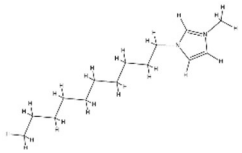
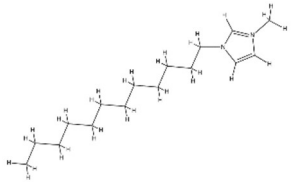
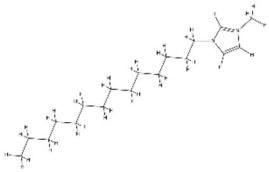
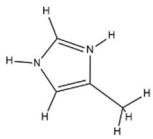
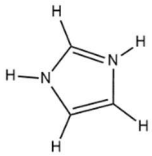
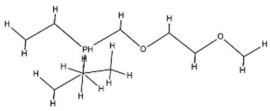
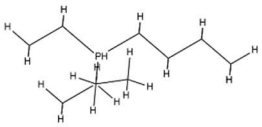
IL	cation	anion	MD run times and temperatures
18	triethylbutylphosphonium	[124triz]	20 ns (440 K, 470 K, 500 K) 40 ns (350 K, 380 K, 410 K)
19	(methyloxymethyl)triethylphosphonium	[124triz]	20 ns (440 K, 470 K, 500 K) 40 ns (350 K, 380 K, 410 K)
20	triethyl((2-methoxyethoxy)methyl)phosphonium	[124triz]	20 ns (440 K, 470 K, 500 K) 40 ns (350 K, 380 K, 410 K)
21	1-ethyl-3-methylimidazolium	[124triz]	20 ns (440 K, 470 K, 500 K) 40 ns (350 K, 380 K, 410 K)
22	1-n-butyl-3-methylimidazolium	[124triz]	20 ns (440 K, 470 K, 500 K) 40 ns (350 K, 380 K, 410 K)
23	1-n-butyl-1-methylpyrrolidinium	[124triz]	20 ns (440 K, 470 K, 500 K) 40 ns (350 K, 380 K, 410 K)
24	triethylbutylphosphonium	[CNPyr]	20 ns (440 K, 470 K, 500 K) 40 ns (350 K, 380 K, 410 K)
25	(methyloxymethyl)triethylphosphonium	[CNPyr]	20 ns (440 K, 470 K, 500 K) 40 ns (350 K, 380 K, 410 K)
26	triethyl((2-methoxyethoxy)methyl)phosphonium	[CNPyr]	20 ns (440 K, 470 K, 500 K) 40 ns (350 K, 380 K, 410 K)
27	1-ethyl-3-methylimidazolium	[CNPyr]	20 ns (440 K, 470 K, 500 K) 40 ns (350 K, 380 K, 410 K)
28	1-n-butyl-3-methylimidazolium	[CNPyr]	20 ns (440 K, 470 K, 500 K) 40 ns (350 K, 380 K, 410 K)
29	1-n-butyl-1-methylpyrrolidinium	[CNPyr]	20 ns (440 K, 470 K, 500 K) 40 ns (350 K, 380 K, 410 K)

[124triz] 1,2,4-triazolide
[CNPyr] 2-(cyano)pyrrolide

Supporting Table 2: Structure diagrams of A) 1,2,4-triazolide, B) 2-(cyano)pyrrolide, C) bis(trifluoromethanesulfonyl)imide, D) hexafluorophosphate

A 	**B** 
C 	**D** 

Supporting Table 3: Structure diagrams of A) (methyloxymethyl)triethylphosphonium, B) 1,2,3,4,5-pentamethylimidazolium, C) 1,2,3,4-tetramethylimidazolium, D) 1,2,3-trimethylimidazolium, E) 1,2,4,5-tetramethylimidazolium, F) 1,2-dimethylimidazolium, G) 1,3,4,5-tetramethylimidazolium, H) 1,3-diethylimidazolium, I) 1,3-dimethylimidazolium, J) 1-ethyl-3-methylimidazolium, K) 1-methylimidazolium, L) 1-n-butyl-1-methylpyrrolidinium, M) 1-n-butyl-3-methylimidazolium, N) 1-n-decyl-3-methylimidazolium, O) 1-n-dodecyl-3-methylimidazolium, P) 1-n-tetradecyl-3-methylimidazolium, Q) 4-methylimidazolium, R) imidazolium, S), triethyl((2-methoxyethoxy)methyl)phosphonium, T) triethylbutylphosphonium

A 	**B** 	**C** 	**D** 
E 	**F** 	**G** 	**H** 
I 	**J** 	**K** 	**L** 
M 	**N** 	**O** 	**P** 
Q 	**R** 	**S** 	**T** 

Supporting Table 4: Regression coefficients for ANN model predictions

descriptors	system	ion	train	valid
calculated	bulk	cation	0.9980	0.9972
calculated	bulk	anion	0.9992	0.9979
calculated	slit pore	cation	0.9952	0.9932
calculated	slit pore	anion	0.9959	0.9957
SMILES	bulk	cation	0.9973	0.9938
SMILES	bulk	anion	0.9975	0.9926
SMILES	slit pore	cation	0.9946	0.9925
SMILES	slit pore	anion	0.9955	0.9954
SMILES	bulk	sigma	0.9945	0.9903
SMILES	slit pore	sigma	0.9915	0.9918

Supporting Table 5: Features use in SMILES feature importance analysis. These features were generated from SMILES strings using the Mordred Python package. Details about the calculations can be found in Moriwaki et al. J. Cheminform., 2018, 10:4

Feature
ABC index[1]
number acid sites
number base sites
number of aromatic atoms
number of atoms total
number of heavy atoms
hybridization ratio of carbons
atom polarizability
bond polarizability
radius
topological shape index
Petit Jean Index[2]
vdW volume ABC
Vertex Adjacency Information
molecular weight
Zagreb index 1[3]
Zagreb index 2[3]
number of hydrogen bond acceptors
number of hydrogen bond donors

1. Estrada, Ernesto. "Atom–bond connectivity and the energetic of branched alkanes." *Chemical Physics Letters* 463.4-6 (2008): 422-425.

2. Petitjean, Michel. "Applications of the radius-diameter diagram to the classification of topological and geometrical shapes of chemical compounds." *Journal of chemical information and computer sciences* 32.4 (1992): 331-337.

3. Pal, Anita. "The generalized Zagreb index of some carbon structures." *Acta Chemica IASI* 26.1 (2018): 91-104.

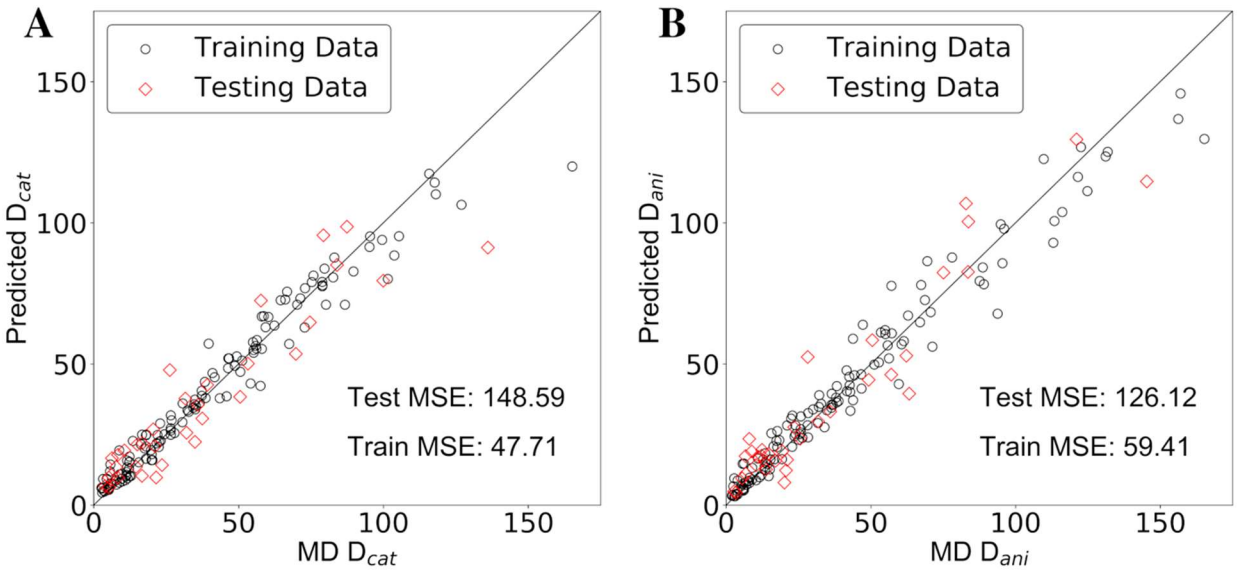
Feature importance using random forest model

In an effort to further explore feature importance relationships a random forest model was created using the bulk IL data and the 24 features shown in Table 2 (main text). The random forest regressor was implemented in scikit learn (version 1.2.1). [Pedregosa 2011] The data was split into train and test sets using an 80/20 split. All features were scaled using the standard scaler which removes the average and sets the variance equal to 1. In the interest of simplicity, the outputs (diffusion coefficient of the anion or cation) were left unscaled. Various parameters of the random forest were tested (Table S6) and the best set of parameters were chosen using 5-fold cross-validation.

Supporting Table 6: List of features and tested values for hyperparameter optimization

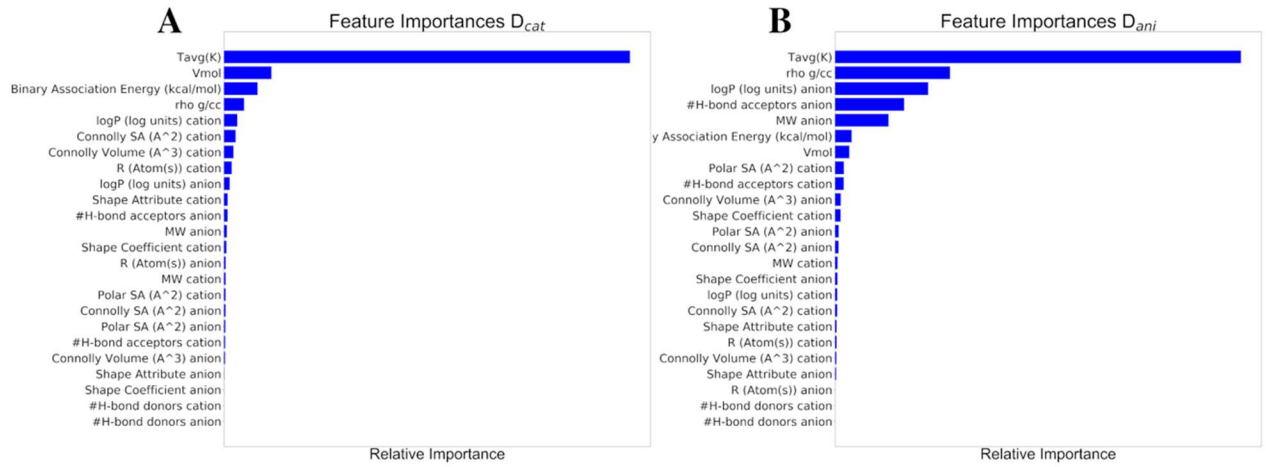
Parameter name	*Values*
Number of trees	25, 50, 100, 200
Tree max depth	3, 6, 9, 12
Minimum samples at leaf node	2, 4, 8, 10, 12
# of features to consider for best split	'log(2)', 'sqrt', 1.0

The optimal hyperparameters for the cation predictions were found to be number of trees = 200, tree max depth = 12, minimum samples at leaf node = 2, and # of features to consider for best split = 1.0. The optimal hyperparameters for the anion predictions were found to be number of trees = 25, tree max depth = 12, minimum samples at leaf node = 2, and # of features to consider for best split = 1.0. After the optimal hyperparameters were found, feature importance was computed using the Gini importance.



Supporting Figure 9: ML predicted and MD calculated diffusion coefficients for the (A) cation and (B) anion. Train (black squares) and test (red diamonds) sets are indicated along with the computed mean squared error (MSE).

The results for the model performance for D_{cat} and D_{ani} for train and test sets are shown in Fig. S9. The feature importance rank for D_{cat} and D_{ani} are shown in Fig. S10. We should note the mean squared error (MSE) is significantly lower for the test set versus the training set. We suspect this is due to the small sample size of the test set where outliers at the larger diffusion values can lead to large MSE values that are not compensated for by a large number of values at lower diffusion values. Visually, there does not appear to be any significant overfitting. The feature importance analysis confirms results indicated in the main text. Chemically intuitive features including temperature, density, and binary association energy were found to be important. However, since many features are likely interchangeable, including certain sets of features over others are unlikely to have a major effect on model performance. Incorporating 5-10 features seems reasonable and will likely produce similar models.



Supporting Figure 10: Feature importance calculated using Gini importance from the random forest model for the (A) cation and (B) anion.

1. Pedregosa, F.; Varoquaux, G.; Gramfort, A.; Michel, V.; Thirion, B.; Grisel, O.; Blondel, M.; Prettenhofer, P.; Weiss, R.; Dubourg, V.; Vanderplas, J.; Passos, A.; Cournapeau, D.; Brucher, M.; Perrot, M.; Duchesnay, E., Scikit-Learn: Machine Learning in Python, *Journal of Machine Learning Research* **2011,** *12,* 2825-2830

Supporting Table 7: Density and D values from MD simulations for bulk ILs

IL	pairs	density g/cc	T_{avg} (K)	T+/- (K)	MSD cat (Å^2)	MSD ani (Å^2)	D_cat (10^{-12} m^2/s)	Dcat +/- (10^{-12} m^2/s)	D_ani (10^{-12} m^2/s)	Dani +/- (10^{-12} m^2/s)	log (slope_cat)	log (slope_ani)	sigma (S/m)
1	400	1.672	349.9	7.9	80.7	65.0	29.1	2.0	21.8	1.8	0.93	0.73	0.498
1	400	1.640	379.8	8.6	191.6	141.0	77.5	3.7	52.1	6.1	0.91	0.94	1.143
1	400	1.610	409.8	9.3	374.8	268.0	150.6	8.2	103.7	3.9	1.01	0.96	2.042
1	400	1.578	439.8	10.0	641.4	449.4	266.2	20.5	183.8	14.3	1.00	0.91	3.301
1	400	1.548	469.8	10.7	994.5	692.8	410.2	20.7	283.5	12.8	0.98	0.93	4.672
1	400	1.518	499.8	11.4	1462.2	1020.1	603.2	21.7	416.2	19.0	1.02	0.99	6.328
2	400	1.591	349.9	7.9	137.8	100.7	52.2	3.2	34.8	3.4	0.88	0.80	0.778
2	400	1.559	379.8	8.6	284.7	211.5	112.0	7.9	80.1	5.3	0.97	0.95	1.551
2	400	1.530	409.8	9.3	504.4	363.0	205.4	12.4	146.7	9.8	0.99	0.91	2.585
2	400	1.500	439.8	9.9	834.0	592.9	343.7	25.7	239.8	21.4	0.97	1.00	3.911
2	400	1.469	469.7	10.6	1245.0	892.7	512.6	25.4	368.9	22.6	0.97	0.92	5.420
2	400	1.439	499.7	11.3	1788.7	1259.0	729.4	34.2	512.0	35.1	1.04	0.96	7.028
3	400	1.592	349.8	7.9	103.2	80.7	37.8	5.2	28.1	3.0	0.84	0.75	0.589
3	400	1.560	379.8	8.6	242.6	183.6	96.6	5.7	70.0	8.2	0.91	0.91	1.345
3	400	1.529	409.8	9.3	451.9	342.2	181.1	8.7	132.8	8.8	0.96	1.00	2.302
3	400	1.499	439.8	9.9	783.2	582.7	323.9	21.0	236.2	21.6	0.94	0.92	3.752
3	400	1.469	469.8	10.6	1172.9	879.5	487.2	38.5	364.3	36.8	0.91	0.93	5.233
3	400	1.438	499.8	11.3	1719.6	1288.5	702.4	30.2	527.7	33.8	1.00	1.02	6.959
4	400	1.469	349.9	7.8	253.0	157.3	98.7	8.6	59.5	8.1	0.97	0.91	1.306
4	400	1.439	379.8	8.5	489.0	292.3	199.8	13.0	115.5	11.3	0.92	0.87	2.349
4	400	1.410	409.8	9.2	800.4	485.2	320.4	12.3	193.9	8.5	1.04	0.96	3.477
4	400	1.381	439.8	9.9	1238.2	781.6	505.6	17.8	317.9	14.9	0.94	1.03	5.081
4	400	1.353	469.8	10.5	1776.9	1136.9	728.3	33.7	467.8	29.2	1.04	0.98	6.771
4	400	1.325	499.8	11.2	2436.2	1530.9	999.7	53.6	622.6	46.3	1.05	1.00	8.452
5	400	1.527	349.9	7.9	135.5	99.6	49.9	2.8	35.5	2.5	0.86	0.78	0.706
5	400	1.496	379.9	8.5	295.4	211.7	115.2	6.4	81.0	4.5	0.95	0.87	1.462
5	400	1.467	409.8	9.2	552.0	386.1	224.7	11.2	150.8	9.2	1.02	0.97	2.544
5	400	1.438	439.8	9.9	889.9	632.1	366.0	13.8	259.0	21.5	1.04	0.97	3.867
5	400	1.409	469.8	10.5	1332.1	948.2	552.2	31.1	382.2	14.7	0.99	0.99	5.304
5	400	1.378	499.8	11.2	1895.3	1362.5	789.9	29.6	562.7	29.8	0.99	0.95	7.060
6	400	1.477	349.8	7.8	133.1	89.2	48.7	2.0	30.9	1.8	0.97	0.89	0.613
6	400	1.447	379.8	8.5	295.4	200.0	115.5	11.2	75.9	6.8	1.01	1.00	1.331
6	400	1.419	409.8	9.2	532.5	358.7	217.6	13.4	142.7	7.3	0.96	0.90	2.276
6	400	1.389	439.8	9.8	863.7	600.1	349.7	19.7	239.3	17.6	1.00	1.02	3.394
6	400	1.359	469.8	10.5	1350.2	942.6	563.4	24.7	382.5	30.7	0.96	1.01	4.994
6	400	1.332	499.8	11.2	1906.4	1338.2	789.3	27.7	550.4	40.7	0.98	0.99	6.514
7	400	1.432	349.8	7.8	150.9	111.8	54.9	4.0	39.6	2.9	0.83	0.79	0.682
7	400	1.402	379.8	8.5	310.8	236.2	122.2	8.3	90.1	7.2	0.97	0.92	1.381
7	400	1.373	409.8	9.1	563.0	423.3	225.7	15.0	167.2	10.5	0.97	0.98	2.320

7	400	1.345	439.8	9.8	912.1	690.0	372.9	20.1	281.4	22.7	0.99	0.97	3.526
7	400	1.316	469.8	10.4	1365.7	1036.5	559.4	22.0	417.1	11.8	1.02	1.02	4.821
7	400	1.287	499.8	11.1	1932.1	1500.9	788.9	47.4	614.0	38.3	1.01	0.99	6.368
8	400	1.430	349.9	7.8	142.8	97.9	52.3	4.5	34.4	2.2	0.88	0.87	0.624
8	400	1.401	379.8	8.4	292.2	207.1	113.6	8.8	79.4	6.9	0.90	0.86	1.255
8	400	1.372	409.8	9.1	556.9	387.1	220.3	13.1	153.1	10.5	0.97	0.99	2.203
8	400	1.344	439.8	9.8	913.8	644.8	373.2	20.3	257.9	22.8	0.93	0.97	3.397
8	400	1.314	469.8	10.5	1378.5	1050.2	561.8	26.6	428.5	17.6	0.95	1.01	4.883
8	400	1.286	499.8	11.1	1994.2	1475.8	826.7	33.7	606.3	31.7	0.99	1.01	6.497
9	400	1.430	349.9	7.8	110.8	79.6	39.2	3.9	27.4	2.7	0.78	0.66	0.479
9	400	1.402	379.8	8.5	234.4	176.4	89.9	7.0	66.1	6.3	0.90	0.84	1.015
9	400	1.373	409.8	9.1	457.0	341.8	180.3	8.1	135.1	8.3	0.98	0.95	1.861
9	400	1.345	439.8	9.8	779.1	582.3	316.3	17.2	234.8	11.0	0.95	0.99	2.970
9	400	1.317	469.8	10.4	1202.1	929.0	493.8	22.1	379.9	23.2	0.98	0.96	4.317
9	400	1.289	499.8	11.1	1755.9	1335.0	713.5	43.4	549.4	23.7	1.05	1.02	5.738
10	400	1.396	349.9	7.7	88.4	65.4	28.9	2.5	21.4	2.1	0.72	0.67	0.342
10	400	1.369	379.8	8.4	205.0	150.1	77.7	5.8	55.3	6.2	0.93	0.88	0.817
10	400	1.339	409.8	9.1	417.2	306.8	167.7	13.0	122.4	7.8	0.89	0.90	1.615
10	400	1.311	439.8	9.7	749.2	550.3	307.3	18.0	224.4	18.4	1.01	0.99	2.699
10	400	1.284	469.8	10.4	1130.9	888.9	467.2	21.5	364.6	30.9	0.99	0.96	3.872
10	400	1.256	499.8	11.1	1618.4	1299.0	667.6	30.8	534.9	33.1	0.93	1.03	5.148
11	400	1.423	349.8	7.8	280.3	163.9	109.0	6.8	61.6	3.3	0.97	0.90	1.223
11	400	1.393	379.8	8.4	502.5	309.2	203.0	12.0	122.1	7.2	0.96	0.98	2.101
11	400	1.364	409.8	9.1	856.3	526.5	349.5	15.9	210.8	12.3	0.95	0.89	3.285
11	400	1.335	439.8	9.8	1312.2	834.5	541.7	40.3	339.9	26.0	1.01	1.01	4.716
11	400	1.306	469.8	10.5	1823.8	1209.0	746.4	36.0	492.4	22.7	1.00	0.97	6.067
11	400	1.277	499.8	11.1	2527.7	1721.6	1037.9	62.1	706.8	34.6	1.00	1.03	7.856
12	400	1.298	349.8	7.6	161.2	109.5	59.3	2.6	38.4	2.3	0.81	0.81	0.561
12	400	1.270	379.9	8.3	320.1	234.5	122.9	7.5	90.1	7.9	0.85	0.86	1.103
12	400	1.245	409.8	8.9	539.9	422.9	211.4	14.6	170.2	8.9	0.97	0.93	1.794
12	400	1.215	439.8	9.5	892.9	708.7	352.5	26.2	283.0	11.0	0.99	1.00	2.719
12	400	1.190	469.8	10.2	1354.9	1092.6	550.0	33.6	443.5	23.6	1.01	0.99	3.898
12	400	1.163	499.8	10.9	1837.7	1629.6	753.1	37.8	670.0	46.6	0.93	0.97	5.126
13	400	1.358	349.8	7.9	236.0	148.0	88.7	4.8	57.5	6.7	0.95	0.96	1.586
13	400	1.326	379.8	8.6	501.1	338.6	197.8	7.8	134.8	5.7	0.99	1.04	3.246
13	400	1.297	409.8	9.3	852.7	632.0	347.2	22.9	263.8	17.5	0.96	0.97	5.403
13	400	1.265	439.8	10.0	1408.6	1044.6	580.4	41.2	429.4	34.1	1.00	1.04	8.120
13	400	1.237	469.8	10.6	2050.3	1558.9	840.0	44.5	632.6	23.2	1.06	1.08	10.839
13	400	1.209	499.8	11.3	2809.0	2246.1	1177.1	67.6	938.1	32.8	0.97	1.03	14.298
14	250	1.284	329.9	7.6	93.2	53.6	34.0	4.7	19.8	2.4	0.74	0.69	0.527
14	250	1.258	359.8	8.3	210.9	148.5	78.5	4.7	58.3	5.5	0.85	0.97	1.205
14	250	1.229	389.8	9.0	455.4	331.1	175.9	10.2	135.0	15.5	0.98	0.94	2.469
14	250	1.201	419.8	9.7	427.6	319.2	327.7	29.3	250.1	26.0	0.91	0.89	4.165

14	250	1.175	449.8	10.4	641.7	531.1	506.2	26.5	438.4	18.5	0.88	1.00	6.216
15	192	1.081	409.8	9.3	132.4	106.6	44.7	3.3	39.5	4.1	0.61	0.94	0.432
15	192	1.058	439.9	10.0	238.4	225.0	83.8	11.0	88.6	9.5	0.79	1.02	0.806
15	192	1.034	469.8	10.7	232.6	221.0	163.5	13.3	176.7	23.2	0.74	0.90	1.455
15	192	1.013	499.8	11.4	366.7	395.7	265.7	39.7	320.3	18.8	0.79	0.95	2.308
16	192	1.052	409.8	9.3	106.2	76.1	32.4	4.5	27.9	4.3	0.65	0.83	0.280
16	192	1.029	439.8	10.0	177.6	150.5	57.7	7.2	57.0	6.8	0.71	0.89	0.485
16	192	1.007	469.8	10.6	299.4	307.4	105.9	10.7	124.2	11.7	0.75	0.85	0.890
16	192	0.987	499.8	11.3	266.9	280.9	181.8	27.6	229.0	41.5	0.73	0.86	1.465
17	192	1.005	439.8	9.9	173.6	162.0	56.2	7.5	61.8	10.2	0.53	0.89	0.455
17	192	0.981	469.8	10.6	264.2	281.4	88.1	12.7	110.2	10.6	0.63	0.78	0.699
17	192	0.962	499.8	11.2	453.5	518.2	166.9	24.7	210.6	20.9	0.79	0.94	1.226
18	300	0.920	349.8	7.8	170.3	200.9	61.4	6.0	79.9	5.8	0.84	0.95	1.093
18	300	0.901	379.8	8.5	321.8	436.1	123.2	10.3	176.8	10.5	0.95	1.04	2.094
18	300	0.883	409.8	9.2	570.4	786.2	229.5	21.5	321.5	27.0	0.89	1.01	3.493
18	300	0.865	439.8	9.9	480.8	688.1	383.7	28.3	571.3	40.1	0.98	0.98	5.524
18	300	0.846	469.8	10.5	719.8	1006.1	577.3	34.2	828.8	83.2	0.95	0.94	7.450
18	300	0.829	499.8	11.2	974.4	1438.7	793.0	55.9	1210.9	94.2	0.97	0.99	9.778
19	300	0.980	349.8	7.9	254.9	316.5	97.8	7.0	128.0	9.7	0.88	0.95	1.958
19	300	0.960	379.8	8.6	449.6	620.0	180.5	11.0	254.1	21.1	0.94	1.09	3.401
19	300	0.940	409.8	9.3	757.8	1025.4	306.0	17.6	426.8	22.9	0.92	0.97	5.206
19	300	0.921	439.8	9.9	574.2	827.7	463.9	32.1	686.9	39.6	0.96	1.00	7.460
19	300	0.903	469.8	10.6	819.3	1168.8	661.2	55.7	960.6	65.9	0.93	1.00	9.647
19	300	0.884	499.7	11.3	1131.0	1583.1	954.0	77.0	1318.5	96.6	1.00	1.00	12.449
20	300	1.240	349.8	7.8	221.7	272.0	82.9	2.7	110.2	9.1	0.88	0.98	1.427
20	300	1.215	379.8	8.5	401.2	549.8	156.0	11.9	228.1	17.3	0.95	0.97	2.563
20	300	1.191	409.8	9.2	672.8	941.4	265.9	13.0	388.6	26.1	0.93	1.02	3.965
20	300	1.166	439.8	9.8	527.4	764.8	417.5	22.5	628.7	38.0	0.92	1.03	5.784
20	300	1.142	469.8	10.5	780.0	1068.9	623.9	56.68	886.8	36.50	0.97	0.97	7.655
20	300	1.118	499.8	11.2	1020.6	1488.5	830.9	80.41	1215.6	84.82	0.98	0.97	9.547
21	300	1.087	349.8	8.1	291.2	255.3	117.3	7.74	103.3	5.57	0.84	0.96	2.739
21	300	1.067	379.8	8.8	578.9	505.8	235.7	15.34	206.9	13.96	0.97	1.01	4.967
21	300	1.046	409.8	9.5	956.1	847.9	386.2	32.03	348.1	19.59	1.07	0.96	7.491
21	300	1.027	439.8	10.2	727.0	677.5	593.4	43.24	558.2	46.19	0.99	1.00	10.739
21	300	1.007	469.8	10.9	1055.7	991.6	874.2	76.23	835.9	57.80	1.01	1.01	14.647
21	300	0.988	499.7	11.6	1396.0	1333.5	1158.3	73.94	1130.5	114.47	0.99	1.01	18.077
22	300	1.037	349.8	8.0	175.9	150.1	64.4	3.30	58.6	5.57	0.84	0.92	1.260
22	300	1.018	379.8	8.7	370.6	336.1	146.5	11.51	137.9	13.76	0.94	1.02	2.632
22	300	0.998	409.8	9.3	669.0	630.0	268.9	20.42	258.2	15.10	0.99	0.97	4.432
22	300	0.978	439.8	10.0	563.1	530.6	464.8	34.93	438.2	23.41	1.00	0.99	6.939
22	300	0.959	469.8	10.7	801.2	814.6	645.6	40.05	673.9	45.66	0.96	1.02	9.308
22	300	0.940	499.7	11.4	1158.8	1159.9	952.2	85.65	949.0	57.11	1.05	1.00	12.352
23	300	1.032	349.8	7.9	75.5	64.1	26.7	2.76	24.6	2.34	0.75	0.80	0.515

23	300	1.013	379.8	8.6	173.4	169.0	63.1	4.59	67.0	3.87	0.89	0.92	1.181
23	300	0.993	409.8	9.3	347.0	382.4	135.2	12.61	156.3	8.65	0.90	1.03	2.405
23	300	0.975	439.8	9.9	323.2	348.5	262.8	15.15	282.0	23.76	0.95	0.97	4.112
23	300	0.958	469.8	10.6	499.3	571.2	397.0	15.59	472.4	41.04	0.96	0.97	6.034
23	300	0.940	499.8	11.3	725.0	856.0	587.0	37.37	695.2	50.90	0.99	0.99	8.211
24	300	0.908	349.8	7.8	289.9	430.8	112.6	7.74	173.8	10.66	0.98	0.99	1.998
24	300	0.889	379.8	8.5	505.5	785.4	200.2	16.42	317.3	21.81	0.96	0.95	3.255
24	300	0.870	409.8	9.2	862.6	1382.0	350.8	27.06	572.3	22.49	0.96	0.95	5.268
24	300	0.851	439.8	9.8	659.7	1030.0	532.4	36.95	837.2	51.79	0.95	0.97	7.128
24	300	0.833	469.8	10.5	920.1	1446.5	758.7	50.95	1226.1	88.31	0.95	1.02	9.463
24	300	0.816	499.8	11.2	1212.6	1923.2	995.7	111.22	1570.2	129.41	0.95	0.97	11.256
25	300	0.959	349.8	7.9	419.7	621.1	166.8	14.02	255.8	25.98	0.93	0.96	3.261
25	300	0.939	379.8	8.5	698.0	1036.0	279.0	21.54	425.5	32.22	0.92	0.96	4.902
25	300	0.919	409.8	9.2	1109.5	1712.7	458.9	24.62	712.8	47.59	0.97	1.05	7.394
25	300	0.899	439.8	9.9	825.5	1168.5	674.9	37.61	954.9	86.35	0.98	0.99	9.381
25	300	0.881	469.8	10.6	1094.6	1592.8	896.9	55.16	1311.5	111.44	0.99	0.96	11.658
25	300	0.861	499.8	11.2	1515.8	2173.7	1269.7	65.91	1791.6	75.99	1.02	0.98	14.854
26	300	1.198	349.8	7.8	332.4	481.9	124.2	8.47	192.8	13.84	0.96	0.94	2.121
26	300	1.172	379.9	8.5	572.5	883.6	231.2	15.79	364.0	25.76	0.85	1.01	3.588
26	300	1.148	409.8	9.1	899.1	1377.8	360.0	40.90	570.5	41.19	0.88	0.96	5.092
26	300	1.123	439.8	9.8	702.0	1068.1	552.1	50.05	876.1	84.55	0.90	0.94	7.126
26	300	1.100	469.8	10.5	986.5	1501.1	801.9	60.59	1248.4	73.86	1.00	1.01	9.377
26	300	1.076	499.8	11.1	1309.3	1921.8	1054.0	70.74	1562.4	97.22	0.99	0.94	11.004
27	300	1.046	349.8	8.0	531.8	494.7	215.5	12.80	201.5	14.30	1.00	0.98	4.414
27	300	1.024	379.9	8.7	918.8	890.3	374.8	23.13	360.0	22.83	0.99	1.05	7.011
27	300	1.004	409.8	9.4	1417.4	1449.1	575.8	35.46	596.6	42.40	0.98	0.96	10.165
27	300	0.984	439.8	10.1	1070.5	1076.8	867.4	80.48	890.6	61.13	0.92	0.98	13.925
27	300	0.965	469.8	10.8	1452.4	1422.3	1181.2	67.11	1161.5	62.80	0.99	0.98	17.029
27	300	0.945	499.8	11.5	1958.7	1994.5	1652.2	90.02	1652.6	93.12	1.03	1.01	22.112
28	300	1.009	349.9	7.9	336.1	361.2	128.9	12.84	146.9	10.40	0.97	0.99	2.473
28	300	0.989	379.8	8.6	659.6	723.7	266.0	16.62	300.4	27.93	0.94	0.99	4.582
28	300	0.968	409.8	9.3	1058.5	1142.9	435.3	20.05	466.6	29.72	0.92	0.95	6.625
28	300	0.949	439.8	10.0	852.3	910.2	698.0	42.03	751.0	52.11	0.97	1.01	9.721
28	300	0.929	469.7	10.6	1229.1	1348.7	1015.6	59.15	1134.5	99.52	1.01	1.01	13.217
28	300	0.910	499.7	11.3	1635.9	1748.4	1360.8	119.66	1453.7	88.04	1.00	1.00	15.932
29	300	1.007	349.9	7.9	141.8	175.7	52.1	2.14	67.9	7.27	0.81	0.88	1.060
29	300	0.987	379.8	8.5	318.0	403.1	123.7	6.50	163.8	15.01	0.96	0.90	2.293
29	300	0.967	409.8	9.2	604.5	791.9	244.7	20.35	328.1	25.41	0.96	0.99	4.148
29	300	0.949	439.8	9.9	487.9	616.2	392.0	26.95	505.0	39.32	0.96	0.98	5.942
29	300	0.931	469.8	10.6	723.8	951.1	580.2	59.24	780.8	75.61	0.97	1.03	8.272
29	300	0.912	499.8	11.2	988.0	1319.7	796.8	69.20	1097.5	44.47	0.99	1.02	10.611

Supporting Table 8: Density and D values for ILs confined in slit pores. The height of the slit pore is given by H in angstroms

IL	pairs	H (Å)	density g/cc	T_{avg} (K)	T+/- (K)	MSD cat (Å^2)	MSD ani (Å^2)	D_cat (10^{-12} m^2/s)	Dcat +/- (10^{-12} m^2/s)	D_ani (10^{-12} m^2/s)	Dan i+/- (10^{-12} m^2/s)	log (slope_cat)	log (slope_ani)
1	179	25.2	1.642	349.9	3.7	25.7	19.1	12.1	1.8	8.6	1.1	0.682	0.551
1	179	25.6	1.617	379.8	4.1	49.7	33.7	26.6	4.2	16.3	3.5	0.794	0.647
1	179	26.2	1.579	409.8	4.4	132.7	90.2	78.4	4.8	50.2	7.1	1.026	0.959
1	179	27.0	1.532	439.7	4.7	156.3	105.5	190.8	22.0	117.0	14.4	0.962	0.826
1	179	27.4	1.514	469.7	5.0	253.3	163.1	312.8	25.1	187.7	24.1	1.014	0.918
1	179	28.0	1.477	499.7	5.3	397.8	243.4	504.5	46.0	294.0	31.7	1.033	0.940
1	287	40.1	1.658	349.8	4.5	34.3	26.2	17.4	3.7	12.2	2.3	0.664	0.596
1	287	40.8	1.629	379.9	4.9	85.3	61.9	48.0	5.4	32.4	4.8	1.001	0.789
1	287	41.8	1.588	409.8	5.3	188.4	133.1	112.1	10.5	77.8	9.3	1.002	0.867
1	287	43.1	1.541	439.7	5.7	205.8	141.8	245.8	20.3	162.2	21.5	0.984	0.877
1	287	43.2	1.536	469.8	6.1	289.7	194.1	345.8	35.9	223.9	19.7	0.898	0.851
1	287	44.6	1.488	499.7	6.5	477.1	318.9	600.0	88.0	389.8	66.8	1.032	0.982
1	395	55.5	1.647	349.8	5.0	51.6	39.8	28.1	4.3	19.5	4.1	0.939	0.758
1	395	56.8	1.608	379.8	5.5	134.2	102.2	80.3	17.1	59.7	17.8	0.684	0.585
1	395	58.2	1.571	409.8	5.9	289.5	204.3	176.7	27.5	122.4	34.5	0.965	0.881
1	395	59.1	1.546	439.8	6.3	232.9	165.6	283.3	42.4	188.2	36.8	0.936	0.878
1	395	60.1	1.520	470.0	6.7	340.4	244.4	424.2	57.2	295.6	52.2	0.995	0.958
1	395	61.3	1.492	499.8	7.2	490.8	348.5	607.4	55.0	439.0	63.0	0.966	0.901
1	502	70.8	1.641	349.9	5.4	67.5	53.1	38.0	4.5	28.0	4.7	1.009	1.008
1	502	72.1	1.610	379.8	5.8	148.4	111.7	88.3	12.1	64.1	14.0	0.893	0.794
1	502	73.3	1.584	409.8	6.3	284.2	201.5	175.8	27.3	117.9	27.6	0.960	1.008
1	502	74.9	1.551	439.8	6.8	234.5	170.3	280.7	24.4	192.7	27.9	0.929	0.878
1	502	76.2	1.524	469.8	7.2	361.7	261.2	442.8	58.0	319.7	63.6	0.986	1.022
1	502	78.1	1.487	499.8	7.7	570.9	411.5	738.2	91.8	529.0	65.2	1.019	0.996
2	164	25.0	1.581	349.8	3.8	33.6	24.0	15.9	4.8	10.3	3.1	0.582	0.515
2	164	25.3	1.557	379.8	4.1	69.5	47.0	37.4	6.9	22.5	5.7	0.781	0.750
2	164	26.1	1.515	409.8	4.4	167.8	110.2	100.5	10.8	63.8	8.2	1.083	0.884
2	164	26.7	1.476	439.8	4.8	170.1	120.4	196.7	38.8	137.5	26.5	0.923	0.855
2	164	27.4	1.438	469.8	5.1	289.9	199.1	368.4	42.2	246.5	34.9	1.034	0.977
2	164	27.8	1.420	499.8	5.4	435.0	289.9	546.7	79.6	359.8	75.3	0.994	0.997
2	263	40.4	1.567	349.8	4.6	66.7	49.1	36.1	6.5	25.4	6.6	0.807	0.783
2	263	41.2	1.538	379.8	5.0	142.9	97.1	83.8	12.1	54.2	7.9	0.849	0.817
2	263	42.3	1.495	409.8	5.3	293.2	214.3	178.1	21.3	128.3	13.5	0.887	0.858
2	263	43.3	1.461	439.8	5.7	256.9	193.6	301.5	38.7	225.4	47.6	0.927	0.949
2	263	43.7	1.447	469.8	6.1	377.8	260.0	471.0	51.9	310.9	42.7	1.045	1.015

2	263	44.4	1.424	499.8	6.5	512.5	385.0	644.2	90.6	481.7	80.7	0.984	1.022
2	362	55.7	1.563	349.8	5.1	91.8	66.8	53.2	4.3	37.1	4.9	0.751	0.625
2	362	56.4	1.546	379.8	5.5	155.6	110.0	89.4	11.5	58.5	8.1	0.815	0.762
2	362	58.3	1.494	409.8	5.9	368.9	264.0	229.4	45.6	161.9	38.4	0.861	0.797
2	362	59.0	1.478	439.8	6.4	303.0	221.4	388.4	55.2	272.0	65.2	1.010	0.960
2	362	60.0	1.451	469.8	6.8	424.2	299.7	503.0	53.5	340.8	51.7	0.920	0.876
2	362	61.4	1.420	499.8	7.2	575.1	420.4	669.0	53.2	480.3	82.3	0.886	0.888
2	461	70.8	1.566	349.9	5.4	98.2	76.0	57.6	10.3	43.8	7.2	0.662	0.588
2	461	72.0	1.540	379.9	5.9	192.9	143.0	113.8	15.8	81.8	14.7	0.880	0.777
2	461	73.9	1.500	409.9	6.3	371.0	278.8	231.4	26.5	173.3	22.8	0.883	0.897
2	461	75.3	1.474	439.8	6.8	311.8	227.4	390.4	68.9	275.2	55.2	1.019	0.996
2	461	77.0	1.441	469.8	7.3	509.8	367.4	643.5	138.3	456.5	140.7	0.987	0.918
2	461	79.2	1.401	499.8	7.7	722.7	537.9	869.1	111.6	635.7	111.9	0.931	0.883
3	164	24.9	1.583	349.8	3.8	25.0	18.8	11.5	3.2	8.0	1.6	0.676	0.604
3	164	25.4	1.554	379.8	4.1	64.1	44.7	34.8	6.8	22.8	5.1	0.917	0.711
3	164	26.1	1.511	409.9	4.4	149.5	102.7	87.0	19.1	58.3	9.6	0.903	0.896
3	164	26.6	1.486	439.7	4.8	139.0	104.4	164.9	26.8	123.1	21.4	0.959	0.928
3	164	27.2	1.450	469.7	5.1	249.7	174.0	286.6	35.5	198.2	29.3	0.892	0.931
3	164	27.8	1.419	499.7	5.4	399.1	277.7	476.9	77.1	314.7	54.6	0.939	0.885
3	263	40.2	1.573	349.8	4.6	48.2	37.1	25.2	3.5	18.5	1.8	0.846	0.669
3	263	41.4	1.530	379.8	5.0	134.8	101.8	78.8	7.0	57.0	6.3	0.968	0.893
3	263	41.9	1.509	409.8	5.3	236.3	177.9	140.3	17.6	104.2	11.1	0.953	0.911
3	263	42.3	1.497	439.8	5.7	190.9	139.1	230.9	38.7	157.7	40.3	0.964	0.882
3	263	44.2	1.431	469.7	6.1	373.8	282.1	437.9	46.6	339.8	36.9	0.908	0.961
3	263	44.7	1.416	499.8	6.5	535.6	400.8	661.9	90.7	495.8	67.8	0.960	1.017
3	361	55.1	1.577	349.8	5.1	57.0	46.1	32.6	4.6	24.8	4.6	0.699	0.568
3	361	56.2	1.546	379.9	5.5	138.9	111.0	82.3	8.1	64.3	11.0	0.872	0.853
3	361	57.5	1.511	409.8	5.9	285.2	214.7	168.9	29.2	127.8	25.9	1.019	0.939
3	361	59.1	1.471	439.7	6.4	281.9	219.1	336.3	44.2	258.2	56.7	1.010	0.984
3	361	59.6	1.458	469.8	6.8	392.7	295.6	488.2	87.1	350.7	77.6	0.990	0.976
3	361	61.4	1.415	499.7	7.2	579.4	435.7	718.8	72.3	537.0	57.0	0.994	0.951
3	460	70.9	1.561	349.8	5.4	87.2	71.5	50.1	7.5	40.0	6.0	1.089	1.041
3	460	72.1	1.536	379.8	5.9	165.3	128.8	99.0	14.8	74.2	14.6	0.935	0.933
3	460	73.9	1.497	409.8	6.3	357.1	266.8	221.7	22.5	159.8	18.8	1.069	0.987
3	460	75.1	1.473	439.8	6.8	290.6	228.7	353.3	66.1	266.7	55.2	0.949	0.912
3	460	76.2	1.452	469.8	7.3	439.4	330.4	534.2	87.2	390.4	73.1	1.005	1.024
3	460	78.7	1.406	499.8	7.7	719.9	554.1	885.6	138.2	679.3	124.9	1.068	1.108
4	152	24.9	1.471	349.9	3.8	54.7	30.2	26.6	4.2	13.6	3.2	0.784	0.634
4	152	25.4	1.440	379.8	4.2	129.4	62.6	74.2	10.4	31.8	7.0	0.844	0.768
4	152	26.5	1.381	409.8	4.5	350.7	173.4	206.8	20.7	97.8	13.7	1.039	0.954
4	152	27.0	1.352	439.8	4.8	301.5	178.0	361.9	38.1	214.1	41.6	0.950	1.031
4	152	27.6	1.325	469.9	5.1	452.1	251.1	545.7	59.2	295.6	72.1	1.005	0.825

4	152	27.9	1.312	499.7	5.5	551.2	357.4	682.7	80.5	446.1	78.7	0.977	0.948
4	243	40.2	1.453	349.8	4.6	117.7	66.7	69.3	8.6	36.7	4.9	0.858	0.766
4	243	40.7	1.435	379.8	5.0	207.8	120.8	123.1	11.2	68.4	10.0	0.850	0.785
4	243	42.1	1.390	409.8	5.4	441.0	254.9	261.2	25.3	145.8	33.3	1.036	1.007
4	243	42.9	1.363	439.8	5.8	346.5	216.5	403.1	43.3	247.9	23.5	0.865	0.873
4	243	44.1	1.326	469.7	6.2	586.7	375.1	709.0	102.6	449.2	51.1	0.974	0.973
4	243	44.8	1.304	499.7	6.6	761.6	462.2	928.5	114.1	532.7	91.5	0.953	0.859
4	334	55.3	1.454	349.8	5.1	141.2	83.0	82.4	7.5	45.9	4.0	0.894	0.721
4	334	56.6	1.420	379.8	5.5	305.2	170.8	186.3	22.3	99.1	17.1	0.929	0.895
4	334	58.2	1.381	409.8	6.0	601.1	363.8	366.2	45.9	222.3	69.2	1.030	0.926
4	334	59.1	1.361	439.8	6.4	422.5	269.2	528.3	61.1	328.7	75.8	1.006	1.041
4	334	60.6	1.326	469.8	6.8	585.6	373.6	712.2	108.6	441.5	66.5	0.997	0.961
4	334	62.9	1.278	499.8	7.3	953.1	622.6	1196.1	133.3	772.6	60.5	0.962	0.952
4	425	70.4	1.453	349.8	5.5	172.8	100.2	99.4	9.9	55.2	8.2	1.017	0.872
4	425	72.2	1.416	379.8	5.9	351.0	212.6	214.3	26.2	126.1	24.4	0.939	0.896
4	425	73.3	1.395	409.8	6.4	564.9	367.2	337.2	43.4	209.9	43.7	1.090	1.265
4	425	75.1	1.363	439.8	6.8	431.3	287.3	516.0	105.6	336.0	104.3	0.919	0.856
4	425	76.9	1.330	469.7	7.3	675.9	437.8	802.0	135.2	502.0	109.8	0.951	0.862
4	425	79.4	1.289	499.7	7.8	982.8	656.9	1250.6	226.9	825.7	229.7	1.052	1.066
5	152	25.0	1.522	349.8	3.8	29.0	19.6	13.2	2.8	7.9	2.1	0.651	0.476
5	152	25.6	1.484	379.9	4.2	75.2	46.7	39.4	8.2	23.2	4.0	0.946	0.624
5	152	26.0	1.460	409.8	4.5	148.5	98.5	84.4	14.8	54.2	11.0	0.823	0.900
5	152	26.6	1.428	439.8	4.8	149.4	106.2	168.8	35.6	122.4	26.6	0.906	0.927
5	152	27.7	1.371	469.7	5.1	327.1	226.9	385.4	101.3	257.3	55.8	0.946	0.893
5	152	27.6	1.377	499.7	5.5	369.9	251.2	456.4	65.4	301.2	46.6	0.990	0.984
5	243	40.3	1.506	349.8	4.6	65.8	45.5	34.1	4.1	21.9	3.4	0.809	0.841
5	243	40.9	1.483	379.9	5.0	134.8	92.2	78.8	7.3	52.6	6.6	0.888	0.793
5	243	42.2	1.440	409.8	5.4	301.5	202.7	181.1	25.9	120.6	13.7	1.012	0.750
5	243	42.5	1.429	439.8	5.8	210.6	147.9	247.2	33.3	164.0	30.7	0.962	0.894
5	243	43.4	1.400	469.8	6.2	353.8	249.5	427.8	56.8	283.7	40.4	0.963	0.903
5	243	44.6	1.362	499.7	6.6	535.3	386.5	655.7	55.0	481.8	65.5	0.932	0.958
5	334	54.9	1.519	349.9	5.1	76.5	53.8	42.4	7.5	27.8	6.4	1.028	0.947
5	334	57.0	1.465	379.8	5.5	217.9	143.5	132.4	20.3	83.5	15.7	0.888	0.778
5	334	58.3	1.432	409.8	6.0	365.6	262.7	222.3	24.3	154.9	12.6	0.877	0.753
5	334	59.4	1.406	439.8	6.4	303.2	215.9	375.3	49.6	250.5	39.4	0.907	0.830
5	334	60.4	1.383	469.8	6.8	471.1	348.5	585.0	84.1	418.0	47.9	0.986	0.957
5	334	61.7	1.352	499.8	7.3	679.2	515.7	800.8	117.1	595.3	99.2	0.993	0.942
5	425	70.7	1.501	349.8	5.4	104.4	77.9	60.5	6.2	45.5	8.8	0.783	0.762
5	425	72.4	1.468	379.8	5.9	230.9	167.8	137.3	17.3	99.3	14.2	1.080	1.049
5	425	73.6	1.443	409.8	6.4	371.9	269.4	227.3	24.9	163.2	17.0	1.012	1.026
5	425	75.6	1.404	439.8	6.8	341.1	248.6	415.9	37.0	297.9	36.0	0.954	0.936
5	425	76.9	1.380	469.8	7.3	494.5	369.8	636.1	170.5	478.8	179.6	0.922	0.917

5	425	78.8	1.348	499.8	7.8	698.4	501.1	869.7	125.7	603.1	132.3	0.862	0.762
6	142	24.9	1.480	349.9	3.9	23.6	14.9	8.4	2.4	5.5	1.5	0.414	0.356
6	142	25.7	1.433	379.8	4.2	66.2	36.7	34.2	5.1	16.0	4.6	0.624	0.580
6	142	25.9	1.421	409.8	4.5	123.9	68.9	71.4	11.7	36.5	9.4	0.893	0.718
6	142	26.8	1.374	439.8	4.9	147.3	90.2	163.4	32.8	95.8	14.2	0.868	0.929
6	142	27.4	1.342	469.7	5.2	278.1	166.8	326.6	45.4	191.7	29.5	0.907	0.839
6	142	27.7	1.329	499.8	5.5	361.6	231.9	446.1	48.7	284.8	45.2	0.989	1.008
6	227	40.2	1.463	349.9	4.6	59.0	35.6	30.1	4.9	16.7	2.3	0.842	0.690
6	227	40.8	1.442	379.8	5.0	109.7	72.1	61.0	7.9	38.0	4.9	0.960	0.679
6	227	42.6	1.382	409.8	5.4	328.2	201.3	197.6	23.6	120.2	13.9	0.964	0.738
6	227	42.9	1.373	439.8	5.8	245.1	163.6	300.1	39.4	192.7	51.2	0.864	0.831
6	227	43.0	1.368	469.8	6.2	288.5	197.4	331.7	32.4	226.3	37.6	0.868	0.872
6	227	44.6	1.320	499.7	6.6	508.9	351.6	624.0	118.6	448.2	70.8	0.974	1.041
6	312	55.1	1.466	349.8	5.1	77.8	51.3	41.9	11.5	27.2	9.1	0.800	0.637
6	312	56.5	1.432	379.8	5.6	171.5	115.8	97.3	15.4	62.9	13.9	1.012	1.017
6	312	57.6	1.404	409.9	6.0	334.6	211.7	205.8	36.1	127.7	33.9	0.955	0.795
6	312	59.7	1.354	439.8	6.5	321.6	218.4	376.7	53.7	249.4	35.0	0.925	0.944
6	312	60.0	1.348	469.8	6.9	412.8	284.3	497.9	45.7	335.1	55.3	0.941	0.892
6	312	61.7	1.311	499.8	7.3	623.2	451.8	788.7	111.0	568.5	110.5	1.009	1.009
6	397	70.5	1.459	349.8	5.5	100.9	69.5	59.1	11.2	39.9	9.5	0.748	0.601
6	397	71.9	1.431	379.8	5.9	195.7	137.4	113.3	24.4	78.3	23.6	0.959	0.879
6	397	73.9	1.393	409.8	6.4	386.4	254.2	227.9	19.4	142.8	14.4	0.979	0.954
6	397	75.8	1.357	439.8	6.9	348.6	250.5	415.6	77.3	291.2	46.4	0.990	1.021
6	397	76.8	1.340	469.8	7.4	478.9	348.8	585.8	62.3	427.3	87.9	0.943	0.920
6	397	78.9	1.303	499.8	7.8	758.1	549.0	969.5	245.4	698.2	270.7	0.956	0.956
7	132	24.9	1.424	349.8	3.9	31.8	20.4	12.1	1.8	8.1	2.2	0.667	0.558
7	132	25.4	1.397	379.9	4.2	67.1	42.8	34.4	4.6	20.0	4.1	0.703	0.834
7	132	26.1	1.357	409.9	4.5	163.8	102.5	95.6	15.2	58.7	11.1	0.785	0.771
7	132	26.7	1.328	439.8	4.9	165.2	112.9	187.3	26.6	125.4	16.1	0.834	0.818
7	132	27.1	1.307	469.9	5.2	266.5	184.8	323.6	35.2	212.7	43.0	0.992	0.878
7	132	27.8	1.276	499.8	5.6	401.2	279.4	481.9	64.8	344.1	59.8	0.956	0.985
7	212	39.9	1.426	349.9	4.7	62.5	43.2	31.7	4.5	22.0	4.4	0.720	0.640
7	212	41.1	1.383	379.8	5.1	153.3	105.5	87.1	12.6	57.1	9.7	0.830	0.796
7	212	41.9	1.358	409.8	5.5	265.8	195.9	157.8	25.0	113.3	15.0	0.838	1.053
7	212	43.1	1.321	439.8	5.9	253.0	188.1	305.6	35.6	224.4	23.2	0.931	0.901
7	212	43.7	1.303	469.8	6.3	374.4	283.7	447.3	69.7	332.8	59.7	0.890	0.896
7	212	45.9	1.240	499.7	6.7	674.5	545.6	813.8	79.8	654.1	95.4	0.964	0.986
7	291	55.2	1.416	349.8	5.2	93.9	65.2	52.1	8.5	35.0	7.3	0.885	0.895
7	291	56.1	1.392	379.8	5.6	185.1	140.0	106.5	18.8	80.4	19.9	0.999	1.003
7	291	58.4	1.338	409.8	6.0	454.0	330.8	270.9	32.4	191.4	22.9	1.072	1.101
7	291	59.4	1.316	439.8	6.5	340.6	257.3	415.3	57.1	306.1	50.5	0.992	1.021
7	291	60.5	1.292	469.8	6.9	504.9	382.8	614.3	75.8	458.5	64.6	1.015	1.028

7	291	61.8	1.264	499.8	7.4	688.2	532.6	828.4	105.0	650.6	58.5	0.987	1.051
7	371	70.4	1.414	349.8	5.5	112.0	80.4	63.5	12.4	44.7	9.3	0.806	0.767
7	371	72.3	1.377	379.8	6.0	232.6	165.8	134.6	13.3	95.2	9.1	0.863	0.755
7	371	73.5	1.354	409.8	6.4	412.4	310.5	253.4	39.8	190.6	28.6	0.990	0.884
7	371	75.5	1.319	439.8	6.9	404.4	319.6	518.4	83.3	407.9	100.7	1.028	0.975
7	371	77.7	1.282	469.8	7.4	585.0	450.7	724.1	135.8	556.5	174.8	0.988	0.986
7	371	79.1	1.259	499.8	7.9	796.3	658.2	961.1	180.3	794.9	153.5	0.846	0.873
8	132	24.7	1.435	349.8	3.9	24.6	15.2	8.6	2.4	5.6	2.4	0.470	0.474
8	132	25.3	1.399	379.8	4.2	61.8	34.1	29.1	7.6	14.6	3.6	0.818	0.555
8	132	25.5	1.388	409.8	4.5	102.8	60.5	54.0	7.9	30.2	7.2	0.829	0.707
8	132	26.5	1.337	439.8	4.9	144.2	88.6	166.9	36.1	93.2	25.6	0.854	0.848
8	132	27.3	1.297	469.7	5.2	281.3	184.9	348.1	55.4	226.0	49.0	0.975	0.953
8	132	27.4	1.294	499.7	5.5	330.1	233.2	406.4	54.2	272.5	49.3	1.006	0.993
8	212	40.0	1.424	349.8	4.7	54.6	34.0	26.5	2.1	16.1	2.8	0.690	0.529
8	212	41.2	1.380	379.8	5.1	152.5	93.9	86.9	7.5	51.3	6.7	0.907	0.855
8	212	42.0	1.354	409.8	5.5	303.5	190.5	179.3	19.2	109.0	15.4	1.077	1.072
8	212	42.5	1.340	439.8	5.9	209.8	147.9	241.7	43.5	159.5	29.7	0.907	0.760
8	212	43.4	1.312	469.8	6.3	350.8	242.0	424.3	54.1	293.5	77.0	0.906	0.898
8	212	45.0	1.263	499.7	6.7	624.0	442.6	756.6	115.7	520.5	105.6	1.015	0.998
8	291	55.1	1.418	349.9	5.2	75.8	50.2	38.8	5.0	24.4	3.7	0.722	0.618
8	291	56.1	1.392	379.8	5.6	177.9	116.7	100.1	10.0	62.3	7.3	0.853	0.760
8	291	57.6	1.355	409.8	6.0	329.5	237.7	198.0	27.4	142.2	24.9	0.937	0.888
8	291	58.8	1.329	439.8	6.5	285.2	207.9	350.0	56.8	255.3	58.3	0.976	1.014
8	291	60.2	1.298	469.8	6.9	462.6	331.2	556.0	71.1	387.9	52.2	0.948	0.908
8	291	61.9	1.261	499.8	7.4	742.6	548.3	926.2	155.3	694.3	161.4	1.075	1.040
8	371	70.7	1.408	349.8	5.5	101.3	68.1	57.1	13.5	37.3	8.4	0.741	0.644
8	371	71.9	1.385	379.8	6.0	211.3	143.2	123.5	11.6	80.6	12.4	0.883	0.839
8	371	74.1	1.344	409.8	6.4	459.6	321.0	282.6	63.9	198.3	52.9	1.047	0.936
8	371	75.3	1.322	439.8	6.9	326.8	241.0	383.8	48.8	275.7	55.6	0.930	0.905
8	371	76.9	1.296	469.7	7.4	523.6	402.1	629.7	91.8	481.6	86.8	1.014	1.024
8	371	79.0	1.261	499.7	7.9	745.7	540.6	906.9	62.9	638.8	78.0	0.970	0.971
9	132	24.8	1.429	349.8	3.9	18.9	14.0	8.2	2.4	5.3	1.5	0.593	0.342
9	132	25.8	1.372	379.7	4.2	70.6	45.2	37.6	4.6	21.0	5.6	0.746	0.701
9	132	25.5	1.390	409.8	4.5	77.4	49.2	39.7	7.2	24.1	7.0	0.970	0.825
9	132	26.1	1.356	439.8	4.9	97.1	66.2	102.9	17.6	64.5	14.2	0.749	0.695
9	132	26.8	1.321	469.7	5.2	195.2	128.1	231.6	31.2	148.3	34.6	0.948	0.848
9	132	27.8	1.275	499.7	5.6	359.2	263.7	417.1	72.8	304.5	36.3	0.903	0.917
9	212	40.1	1.419	349.8	4.7	45.2	33.2	22.1	4.6	14.8	3.1	0.771	0.746
9	212	41.1	1.384	379.8	5.1	114.0	80.4	63.9	10.1	44.6	7.5	0.743	0.670
9	212	42.0	1.355	409.8	5.5	245.2	165.1	141.2	26.6	95.9	17.6	1.181	0.946
9	212	43.1	1.322	439.8	5.9	230.4	175.6	275.9	68.0	207.6	49.0	0.895	0.871
9	212	44.0	1.293	469.8	6.3	358.3	259.2	422.6	54.4	290.6	76.2	0.949	0.962

9	212	44.6	1.275	499.8	6.7	478.3	371.6	574.3	79.0	453.2	57.5	0.929	1.027
9	291	55.5	1.409	349.9	5.2	64.8	47.6	34.2	2.0	23.7	3.3	0.883	0.959
9	291	56.4	1.386	379.9	5.6	142.7	106.9	78.8	13.9	58.2	13.7	1.100	1.095
9	291	57.8	1.352	409.8	6.0	291.8	217.7	176.1	43.2	137.3	34.4	0.872	0.680
9	291	58.8	1.329	439.8	6.5	239.8	184.9	287.3	47.5	217.8	39.9	0.961	0.919
9	291	60.9	1.282	469.8	6.9	494.8	393.3	607.8	147.6	477.3	146.2	0.992	0.968
9	291	61.9	1.262	499.8	7.4	624.3	472.0	785.9	150.8	588.8	138.8	0.970	0.928
9	371	70.4	1.415	349.8	5.5	76.5	59.6	41.3	4.7	32.2	6.0	0.815	0.656
9	371	71.9	1.386	379.8	6.0	162.9	127.2	91.9	11.0	70.3	11.8	0.967	0.958
9	371	73.7	1.352	409.8	6.4	338.1	256.8	202.7	35.3	155.1	32.8	0.989	0.923
9	371	74.9	1.329	439.8	6.9	271.8	212.7	330.6	74.7	253.8	78.9	0.998	0.941
9	371	77.2	1.290	469.8	7.4	448.6	368.4	545.2	48.8	445.4	36.5	0.946	0.925
9	371	78.7	1.265	499.8	7.9	686.3	541.5	867.6	177.5	680.5	189.7	1.032	1.053
10	125	25.0	1.390	349.8	3.9	24.0	15.0	6.7	1.9	5.6	1.4	0.641	0.427
10	125	25.5	1.361	379.8	4.3	41.4	23.3	16.6	3.7	8.8	3.3	0.540	0.410
10	125	26.0	1.333	409.8	4.6	78.0	47.4	38.7	9.8	21.2	5.1	0.626	0.693
10	125	26.2	1.323	440.0	4.9	79.7	48.7	77.8	13.2	43.3	11.2	0.731	0.671
10	125	26.9	1.292	469.8	5.3	157.1	94.6	173.8	28.8	97.3	30.2	0.888	0.832
10	125	27.9	1.243	499.8	5.6	341.4	237.2	413.8	56.4	274.0	51.4	0.971	0.898
10	200	40.2	1.383	349.8	4.7	37.8	23.9	15.1	2.9	10.6	3.7	0.707	0.547
10	200	41.1	1.353	379.8	5.1	96.5	67.6	51.0	10.6	36.5	8.4	0.909	0.763
10	200	41.5	1.337	409.8	5.5	161.9	110.2	92.2	10.4	62.2	12.2	0.742	0.824
10	200	42.4	1.308	439.8	5.9	163.7	122.3	185.6	37.2	137.3	23.7	0.858	0.808
10	200	43.9	1.266	469.8	6.3	315.1	225.7	361.4	67.5	248.1	38.9	0.851	0.788
10	200	44.8	1.238	499.9	6.7	475.4	350.7	552.6	85.7	408.6	32.8	0.845	0.816
10	275	55.5	1.376	349.8	5.2	63.4	42.1	31.4	5.9	20.7	3.5	0.696	0.615
10	275	56.1	1.361	379.8	5.6	105.3	74.3	58.3	12.0	40.4	11.7	0.651	0.757
10	275	57.7	1.323	409.8	6.1	257.9	187.7	156.2	21.0	112.2	20.4	0.896	0.779
10	275	58.6	1.303	439.9	6.5	225.6	170.0	259.8	48.8	192.5	41.4	0.902	0.911
10	275	60.6	1.260	469.8	7.0	391.8	291.0	481.1	73.6	348.0	47.3	0.960	0.918
10	275	61.5	1.242	499.8	7.4	574.2	448.0	708.2	165.3	553.8	123.0	0.931	0.921
10	350	70.0	1.388	349.8	5.5	54.7	39.6	27.1	6.4	19.6	6.1	0.559	0.595
10	350	71.9	1.352	379.8	6.0	151.7	114.8	87.3	14.6	65.6	15.1	0.939	0.943
10	350	73.9	1.316	409.8	6.5	320.0	231.8	195.1	37.9	141.8	39.4	0.980	0.928
10	350	75.8	1.282	439.8	7.0	328.0	251.8	416.4	77.9	310.6	100.4	1.002	0.972
10	350	77.0	1.262	469.8	7.4	440.9	339.9	523.5	98.9	395.7	100.1	1.013	0.976
10	350	79.4	1.224	499.8	7.9	710.8	572.6	823.3	145.9	653.5	166.7	0.899	0.897
11	132	25.1	1.411	349.8	3.9	88.6	39.5	48.5	7.5	18.3	3.2	0.781	0.526
11	132	25.6	1.385	379.8	4.2	156.3	78.7	89.0	13.6	39.8	8.2	0.956	0.758
11	132	26.4	1.341	409.8	4.5	343.8	192.4	214.7	25.9	114.2	20.3	0.799	0.818
11	132	27.0	1.314	439.8	4.9	296.0	169.6	355.8	65.5	196.7	36.2	0.984	0.870
11	132	27.3	1.298	469.8	5.2	423.8	236.7	513.8	97.2	286.9	46.9	1.008	0.935

11	132	28.5	1.243	499.9	5.5	726.9	440.0	887.0	153.2	539.3	65.0	0.952	1.021
11	211	40.3	1.406	349.8	4.7	142.5	78.0	81.8	10.1	43.2	5.1	0.887	0.743
11	211	41.1	1.378	379.9	5.1	279.4	149.3	166.8	24.9	88.1	18.3	0.901	0.795
11	211	42.3	1.338	409.9	5.5	526.8	310.8	325.8	20.7	193.6	33.2	0.989	0.864
11	211	43.4	1.306	439.8	5.9	428.7	257.2	519.7	61.6	311.0	54.5	1.030	0.987
11	211	44.0	1.286	469.8	6.3	558.6	363.0	668.5	68.5	412.1	59.8	0.960	0.857
11	211	45.4	1.248	499.8	6.7	825.3	532.9	1022.8	97.2	650.6	86.2	1.034	1.025
11	290	55.5	1.403	349.8	5.2	172.0	105.5	100.9	10.0	59.7	9.2	0.906	0.881
11	290	56.7	1.373	379.8	5.6	334.8	193.6	196.8	25.5	112.9	19.7	1.031	0.891
11	290	58.2	1.337	409.8	6.0	625.0	415.5	383.4	74.4	254.3	75.2	0.905	0.996
11	290	59.9	1.300	439.8	6.5	473.1	330.1	566.0	82.3	404.5	46.5	0.922	0.972
11	290	60.9	1.278	469.8	6.9	655.1	447.3	788.8	94.2	528.2	104.3	0.988	0.985
11	290	62.6	1.244	499.8	7.4	910.2	652.7	1095.3	143.7	789.1	108.8	0.970	1.020
11	369	70.9	1.396	349.8	5.5	213.6	128.2	122.6	16.8	72.4	14.0	0.997	0.942
11	369	72.5	1.367	379.8	6.0	407.8	252.3	247.7	39.0	152.8	40.9	0.978	0.911
11	369	72.9	1.359	409.8	6.4	539.1	333.0	336.2	44.5	203.6	32.8	0.981	0.968
11	369	75.8	1.307	439.9	6.9	507.1	336.3	605.9	73.4	401.3	54.3	0.916	0.916
11	369	77.1	1.284	469.8	7.4	674.8	463.3	837.4	120.3	563.2	100.4	0.906	0.899
11	369	79.4	1.247	499.8	7.9	954.1	692.5	1142.4	153.5	814.7	168.8	0.890	0.861
12	106	25.2	1.286	349.8	4.0	47.2	28.2	22.4	4.9	11.8	2.5	0.594	0.645
12	106	25.7	1.258	379.8	4.3	107.3	66.3	56.7	9.2	34.0	4.5	0.866	0.826
12	106	26.0	1.245	409.8	4.7	171.5	115.8	101.1	15.3	67.8	10.8	0.788	0.773
12	106	26.8	1.206	439.8	5.0	183.0	129.4	205.7	37.4	153.0	19.0	0.915	0.939
12	106	27.7	1.170	469.7	5.4	311.5	218.5	352.2	62.5	251.9	46.7	0.905	0.822
12	106	28.1	1.151	499.7	5.7	425.8	315.4	500.6	71.8	380.6	57.7	0.919	0.947
12	169	40.0	1.290	349.8	4.8	71.3	48.4	38.2	2.5	24.0	6.7	0.763	0.896
12	169	41.2	1.252	379.8	5.2	170.8	119.0	96.8	18.5	65.0	12.3	0.924	1.063
12	169	42.1	1.227	409.8	5.6	300.8	222.8	179.5	28.7	133.1	26.5	0.895	0.907
12	169	43.2	1.194	439.8	6.0	275.5	210.3	344.3	41.3	256.7	34.6	0.961	0.941
12	169	44.7	1.154	469.8	6.4	463.6	379.2	540.2	62.9	440.0	75.8	0.847	0.794
12	169	45.8	1.128	499.8	6.8	628.8	527.7	696.5	100.6	629.6	126.7	0.853	1.006
12	232	55.6	1.275	349.9	5.2	100.0	69.6	54.9	5.4	37.6	7.0	0.683	0.704
12	232	56.3	1.258	379.8	5.7	204.5	148.7	119.3	21.0	89.2	17.6	0.854	0.805
12	232	58.1	1.220	409.8	6.1	404.6	296.6	247.2	40.3	183.1	41.1	0.995	0.855
12	232	59.2	1.196	439.8	6.6	298.2	235.2	342.0	50.5	275.2	51.2	0.917	0.909
12	232	60.8	1.166	469.8	7.0	468.4	392.5	530.5	125.0	453.7	122.6	0.867	0.932
12	232	62.2	1.140	499.7	7.5	695.0	593.5	826.7	211.4	717.4	165.3	1.040	1.052
12	296	70.9	1.275	349.8	5.6	125.7	90.6	71.3	16.6	52.0	14.1	0.899	0.875
12	296	72.7	1.243	379.8	6.1	246.1	188.5	135.6	19.7	105.3	14.7	0.951	0.968
12	296	74.4	1.215	409.8	6.5	433.0	329.4	258.9	50.1	198.0	39.0	0.996	0.857
12	296	75.9	1.192	439.8	7.0	378.0	310.4	449.4	68.0	385.2	75.4	1.012	1.083
12	296	77.6	1.165	469.8	7.5	535.7	455.8	635.2	92.0	542.1	106.3	0.952	0.955

12	296	80.5	1.124	499.8	8.0	831.7	744.5	1021.9	124.8	904.6	117.2	0.997	1.009
13	200	25.2	1.345	349.8	4.0	54.8	18.9	27.9	5.4	8.3	1.4	0.738	0.318
13	200	25.6	1.320	379.9	4.3	129.1	56.2	74.4	9.0	32.3	8.2	0.934	0.809
13	200	26.3	1.288	409.8	4.7	248.1	141.6	150.0	11.5	86.3	12.1	0.947	0.874
13	200	26.6	1.273	439.7	5.0	223.6	127.6	263.1	33.7	154.2	27.6	0.968	0.952
13	200	27.8	1.215	469.8	5.4	453.4	316.3	536.0	63.8	367.5	56.4	0.980	0.857
13	200	28.9	1.173	499.7	5.7	742.6	546.7	903.0	82.7	674.3	83.4	0.997	0.975
13	319	40.3	1.340	349.8	4.8	120.0	64.4	69.5	9.3	37.2	6.3	0.899	1.009
13	319	40.9	1.321	379.8	5.2	216.3	128.4	129.4	17.6	75.0	8.7	1.002	1.181
13	319	42.3	1.276	409.8	5.6	484.4	332.1	298.9	36.2	205.7	29.2	1.044	1.116
13	319	43.2	1.250	439.8	6.0	389.3	273.4	465.8	60.0	336.3	44.6	0.969	1.050
13	319	44.7	1.208	469.8	6.4	648.5	478.5	792.1	100.4	577.6	72.4	1.001	0.995
13	319	45.8	1.178	499.8	6.8	872.0	691.5	1033.7	97.0	828.9	64.4	0.922	0.969
13	439	55.7	1.335	349.8	5.2	158.3	98.0	93.4	8.7	58.7	7.7	0.983	1.003
13	439	57.0	1.302	379.9	5.7	340.0	214.7	205.7	19.1	130.9	12.6	1.025	0.972
13	439	58.5	1.270	409.8	6.1	604.0	432.7	370.9	49.9	271.3	43.4	0.965	0.907
13	439	59.4	1.252	439.9	6.6	434.5	333.6	516.6	62.8	404.8	78.3	0.963	1.002
13	439	61.2	1.214	469.8	7.0	714.5	551.0	871.0	87.5	683.0	103.6	1.004	1.018
13	439	62.5	1.188	499.8	7.5	1074.7	831.0	1361.1	369.3	1035.4	330.4	1.071	1.026
13	559	70.8	1.336	349.9	5.6	189.1	125.4	112.8	20.6	77.4	20.2	0.815	0.752
13	559	72.4	1.306	379.9	6.1	357.8	243.2	216.7	17.2	148.2	24.9	1.061	1.126
13	559	73.7	1.283	409.8	6.5	600.2	439.2	374.9	55.1	276.3	43.5	1.020	1.071
13	559	76.1	1.243	439.8	7.0	511.4	384.8	633.7	91.4	478.8	76.9	0.996	0.991
13	559	78.4	1.207	469.8	7.5	781.6	621.7	920.3	123.3	723.9	67.1	0.909	0.989
13	559	80.2	1.179	499.7	8.0	1130.7	918.0	1426.3	212.8	1176.6	244.8	0.929	0.954
14	170	25.0	1.275	329.9	3.8	20.9	9.6	10.0	2.5	3.3	1.6	0.504	0.215
14	170	25.7	1.242	359.8	4.2	55.6	27.0	29.6	5.2	13.7	3.6	0.683	0.666
14	170	26.2	1.220	389.9	4.5	123.1	68.0	69.8	8.9	38.8	6.0	1.025	1.028
14	170	26.9	1.184	419.8	4.9	152.4	96.7	181.5	24.4	110.0	20.1	0.922	0.891
14	170	27.5	1.160	450.0	5.2	237.4	182.0	274.3	39.1	223.5	22.9	0.820	0.974
14	272	39.9	1.279	329.8	4.6	36.8	18.4	17.6	2.2	7.7	1.4	0.701	0.571
14	272	41.4	1.234	359.8	5.0	119.7	70.5	68.9	8.0	39.5	9.0	0.844	0.949
14	272	42.1	1.212	389.9	5.4	228.4	158.7	134.2	17.1	95.9	19.0	0.941	1.030
14	272	43.0	1.189	419.8	5.8	214.1	152.3	248.9	28.3	183.0	17.4	0.903	0.874
14	272	44.1	1.158	449.8	6.2	367.6	293.6	436.2	48.4	345.1	52.8	0.944	0.922
14	374	55.4	1.267	329.8	5.0	57.3	35.1	29.4	2.9	18.4	3.4	0.883	1.005
14	374	57.1	1.230	359.8	5.5	161.1	108.4	91.8	8.8	62.2	9.8	0.851	0.898
14	374	58.2	1.207	389.9	5.9	331.2	244.0	204.4	37.8	153.9	37.7	1.021	1.086
14	374	59.3	1.185	419.8	6.4	507.8	409.8	304.8	23.9	252.8	29.5	0.855	0.899
14	374	61.1	1.150	449.9	6.8	845.2	704.5	517.7	35.5	427.7	51.0	0.894	0.965
14	476	70.6	1.265	329.9	5.3	68.9	40.6	36.9	4.7	21.4	3.7	0.671	0.576
14	476	72.4	1.235	359.8	5.8	178.4	125.7	108.0	19.4	78.9	19.7	0.924	1.004

14	476	73.7	1.212	389.8	6.3	321.6	243.7	190.2	26.6	145.4	28.9	0.901	0.993
14	476	76.1	1.174	419.8	6.8	616.5	506.2	366.5	29.1	304.8	34.4	1.118	1.220
14	476	77.9	1.148	449.8	7.3	994.0	876.2	625.9	87.5	563.3	106.9	0.966	0.940
15	111	24.8	1.089	409.8	4.8	26.4	15.9	10.1	3.1	6.5	2.5	0.541	0.895
15	111	25.9	1.044	439.9	5.2	65.1	51.6	29.6	5.4	28.6	7.2	0.799	0.792
15	111	26.1	1.034	469.8	5.5	70.8	56.9	69.3	17.4	58.6	14.2	0.655	0.716
15	111	26.9	1.006	499.7	5.9	138.5	120.3	154.5	48.8	154.2	35.7	0.845	1.060
15	177	40.6	1.061	409.9	5.7	61.4	45.9	28.5	7.3	23.7	7.8	0.756	1.103
15	177	41.1	1.049	439.8	6.1	106.2	89.3	55.6	11.0	51.6	11.1	0.748	0.870
15	177	42.3	1.019	469.7	6.5	217.9	207.1	119.9	18.3	123.3	25.6	0.892	1.032
15	177	43.2	0.997	499.8	6.9	361.5	385.9	208.2	41.5	240.3	41.3	0.831	0.797
15	243	56.0	1.056	409.8	6.2	78.9	61.9	38.4	5.5	32.9	4.6	0.567	0.649
15	243	57.1	1.036	439.8	6.7	154.8	138.8	81.1	9.3	81.0	10.9	0.762	0.862
15	243	58.9	1.004	469.8	7.2	315.1	328.1	173.6	30.8	197.6	32.9	0.943	1.126
15	243	59.8	0.989	499.8	7.6	460.1	491.8	268.4	25.3	298.4	27.1	0.860	0.955
15	309	71.1	1.058	409.8	6.6	99.4	81.1	49.7	8.2	43.7	7.0	0.570	0.716
15	309	72.3	1.039	439.8	7.1	169.5	154.1	90.3	13.0	89.1	12.9	0.899	1.033
15	309	73.9	1.017	469.7	7.6	321.6	324.0	172.4	25.3	184.0	24.7	1.030	1.172
15	309	76.1	0.988	499.8	8.1	492.2	545.8	292.3	57.1	336.9	45.0	0.889	1.101
16	100	24.5	1.067	409.8	4.8	21.2	12.2	8.1	2.9	3.8	2.3	0.425	0.204
16	100	25.5	1.028	439.7	5.2	47.5	36.7	20.7	4.2	18.0	4.7	0.568	0.855
16	100	26.5	0.990	469.8	5.5	81.1	71.8	36.3	7.3	37.2	10.7	0.311	0.767
16	100	27.1	0.966	499.7	5.9	78.3	70.0	72.9	11.6	79.6	19.1	0.622	0.903
16	160	40.6	1.032	409.8	5.7	42.7	28.1	17.3	5.2	13.4	5.9	0.409	0.928
16	160	41.4	1.013	439.8	6.1	85.1	71.9	37.0	12.2	37.5	10.3	0.921	1.075
16	160	42.4	0.989	469.8	6.5	143.8	141.1	68.8	13.1	73.3	20.6	0.732	1.114
16	160	43.1	0.972	499.7	7.0	144.8	142.7	140.2	19.9	160.8	43.7	0.632	0.790
16	220	55.5	1.038	409.8	6.3	59.6	45.1	26.2	5.3	23.7	3.4	0.528	0.753
16	220	57.2	1.007	439.8	6.7	115.0	104.9	57.2	17.5	57.9	14.5	0.482	0.745
16	220	59.0	0.976	469.9	7.2	215.5	216.9	113.9	20.6	126.8	17.9	0.771	0.820
16	220	60.5	0.953	499.8	7.6	193.0	197.5	202.6	32.6	232.5	36.2	0.879	0.986
17	89	24.5	1.018	439.7	5.1	32.4	20.3	12.8	3.9	8.2	4.4	0.483	0.700
17	89	25.7	0.971	469.8	5.5	66.6	62.8	27.0	3.7	31.6	7.9	0.489	0.738
17	89	26.2	0.951	499.7	5.8	96.2	110.0	45.5	18.3	65.7	22.6	0.516	0.759
17	142	40.0	0.995	439.8	6.1	69.1	58.9	31.7	11.9	32.7	10.8	0.692	0.763
17	142	41.0	0.970	469.8	6.5	118.1	122.9	56.4	9.9	69.8	15.9	0.643	0.680
17	142	42.4	0.938	499.8	6.9	225.1	240.3	116.6	28.6	139.4	26.5	0.638	0.717
17	196	54.9	1.002	439.8	6.7	94.4	78.9	42.6	8.0	44.3	10.4	0.660	0.729
17	196	57.6	0.954	469.8	7.2	190.5	209.4	101.6	47.0	127.1	41.9	0.682	0.803
17	196	58.1	0.946	499.8	7.6	261.0	301.2	132.9	25.1	172.6	29.5	0.848	1.037
17	249	70.4	0.991	439.8	7.1	105.4	95.2	48.9	10.7	50.4	13.4	0.656	0.980
17	249	73.0	0.956	469.8	7.6	205.5	216.7	109.4	28.8	124.4	31.9	0.778	1.036

17	249	74.8	0.934	499.8	8.1	310.0	358.9	161.9	41.5	206.6	49.2	0.730	0.821
18	142	25.0	0.913	349.8	4.2	35.8	41.7	16.2	3.5	23.0	4.1	0.640	0.674
18	142	25.6	0.890	379.8	4.6	87.6	124.0	46.6	7.0	72.6	13.2	0.887	1.033
18	142	26.4	0.865	409.8	4.9	210.5	309.6	125.1	20.7	191.0	24.7	0.836	0.846
18	142	27.0	0.845	439.8	5.3	206.2	297.1	229.2	36.9	354.2	49.3	0.846	0.998
18	142	27.3	0.835	469.7	5.7	311.1	434.8	372.2	67.5	545.2	68.3	1.067	1.054
18	142	28.1	0.814	499.7	6.0	470.5	729.4	582.4	89.6	917.3	74.7	0.985	1.046
18	228	40.6	0.903	349.8	5.0	91.6	114.4	48.9	8.3	68.6	10.0	0.892	0.964
18	228	41.4	0.886	379.9	5.4	186.8	252.6	109.8	18.8	153.7	26.2	1.014	1.168
18	228	42.2	0.869	409.8	5.8	300.6	439.4	173.9	20.6	263.6	43.8	0.904	0.952
18	228	43.0	0.852	439.8	6.3	280.1	384.4	333.1	41.0	456.6	49.4	0.952	0.953
18	228	44.6	0.821	469.8	6.7	535.9	737.4	661.2	121.6	917.6	163.8	1.077	1.066
18	228	45.3	0.809	499.7	7.1	698.9	953.3	856.0	110.3	1182.9	125.7	1.004	1.006
18	313	55.8	0.902	349.9	5.4	118.6	153.3	66.7	8.4	93.9	14.3	0.912	1.020
18	313	56.8	0.886	379.8	5.9	231.5	304.3	130.2	23.9	178.9	28.3	1.100	1.082
18	313	57.9	0.869	409.8	6.4	415.4	544.5	258.4	70.5	339.0	73.8	0.949	0.950
18	313	59.4	0.847	439.8	6.8	352.6	495.0	440.7	38.3	623.3	61.5	0.989	0.957
18	313	61.3	0.820	469.8	7.3	553.0	818.6	680.0	94.1	1029.9	52.5	0.959	1.033
18	313	62.3	0.808	499.8	7.8	777.3	1128.1	958.6	208.3	1417.3	155.8	0.983	1.005
18	398	71.3	0.898	349.9	5.8	148.3	189.7	84.1	9.9	115.2	17.4	0.850	1.029
18	398	72.4	0.884	379.8	6.2	268.2	355.4	153.0	24.3	213.1	25.6	0.937	1.000
18	398	74.2	0.862	409.8	6.7	526.9	711.3	325.3	74.6	435.8	53.1	1.011	1.048
18	398	76.1	0.840	439.8	7.2	426.4	571.8	503.0	83.2	676.9	95.8	0.986	0.973
18	398	77.1	0.829	469.8	7.7	578.5	810.3	696.7	175.0	1019.1	212.2	0.908	0.947
18	398	79.2	0.808	499.8	8.2	791.1	1118.4	961.8	140.8	1395.6	140.2	0.884	0.951
19	159	24.9	0.975	349.9	4.2	36.6	45.5	14.2	9.8	24.6	11.9	0.489	0.579
19	159	25.8	0.942	379.8	4.6	137.7	196.3	76.8	21.3	118.1	27.4	0.747	0.898
19	159	26.0	0.934	409.8	4.9	217.5	345.0	127.4	18.6	212.2	28.9	0.858	0.958
19	159	26.9	0.903	439.8	5.3	251.7	367.7	292.6	38.1	452.0	65.9	0.924	1.001
19	159	27.4	0.887	469.7	5.6	349.7	526.4	421.3	82.1	637.5	68.6	0.991	1.012
19	159	28.1	0.865	499.8	6.0	545.8	795.3	692.0	73.7	995.9	128.5	1.059	1.002
19	255	40.2	0.970	349.9	5.0	114.9	155.8	64.7	9.7	94.9	19.2	0.916	1.084
19	255	41.0	0.951	379.8	5.4	227.4	314.4	132.6	17.3	191.9	19.5	1.027	1.026
19	255	41.7	0.934	409.8	5.8	373.9	529.2	225.9	39.7	329.4	46.2	0.955	1.053
19	255	43.4	0.898	439.8	6.2	380.2	531.8	448.9	88.4	637.6	83.5	0.944	0.969
19	255	44.1	0.883	469.8	6.7	521.5	754.2	648.3	89.0	968.3	132.1	1.013	1.026
19	255	45.9	0.849	499.7	7.1	847.3	1213.2	1051.6	181.7	1514.4	186.1	0.927	0.950
19	351	55.6	0.964	349.9	5.4	167.2	211.6	95.5	11.3	125.8	11.1	0.826	0.979
19	351	56.8	0.944	379.9	5.9	317.4	429.1	187.5	31.6	258.9	24.9	0.947	1.012
19	351	58.5	0.917	409.8	6.4	566.9	801.6	340.1	41.4	487.5	65.0	1.056	1.035
19	351	59.0	0.909	439.8	6.8	417.9	574.5	516.1	114.5	708.4	65.8	1.059	1.007
19	351	61.0	0.879	469.8	7.3	681.3	889.5	874.0	164.7	1107.1	123.4	1.012	0.988

19	351	62.0	0.864	499.8	7.8	897.2	1215.1	1122.1	248.7	1566.9	198.5	1.025	1.016
19	446	70.8	0.963	349.8	5.7	200.1	250.5	118.5	18.9	154.1	22.0	0.867	0.874
19	446	72.0	0.946	379.8	6.2	409.2	514.1	256.0	80.5	325.0	81.2	0.960	0.977
19	446	73.6	0.925	409.8	6.7	634.0	828.9	397.7	74.3	525.7	79.3	0.765	0.763
19	446	75.8	0.899	439.8	7.2	477.2	650.9	555.6	34.5	775.9	98.2	0.845	0.880
19	446	77.1	0.884	469.8	7.7	688.3	935.1	848.7	161.2	1171.5	174.4	0.901	0.936
19	446	79.4	0.859	499.8	8.2	996.4	1366.9	1224.7	243.0	1719.0	221.9	0.982	1.029
20	136	25.1	1.230	349.9	4.2	65.3	70.6	32.4	4.0	40.2	6.3	0.732	1.038
20	136	25.7	1.203	379.8	4.6	125.6	167.7	68.5	8.9	99.8	14.8	0.761	0.896
20	136	26.3	1.172	409.8	4.9	252.1	364.1	138.8	15.2	219.3	22.1	1.004	1.033
20	136	27.0	1.143	439.7	5.3	225.3	333.4	252.5	41.8	409.5	54.9	0.787	1.000
20	136	27.7	1.115	469.8	5.7	386.3	551.3	446.6	83.7	665.4	104.4	0.901	0.998
20	136	28.3	1.089	499.7	6.0	546.5	819.9	658.1	126.2	1038.9	87.1	0.941	1.079
20	217	40.4	1.218	349.9	5.0	125.3	146.9	67.3	4.7	86.0	8.6	0.933	0.925
20	217	41.3	1.191	379.8	5.4	237.7	327.1	132.7	16.3	199.3	18.6	0.946	1.062
20	217	41.9	1.175	409.8	5.8	366.1	493.0	211.5	39.9	300.5	40.5	0.950	0.812
20	217	43.3	1.137	439.8	6.3	328.9	475.2	386.8	69.9	585.4	94.7	0.835	0.978
20	217	44.3	1.111	469.8	6.7	522.3	726.0	654.1	154.3	911.3	132.9	0.880	0.908
20	217	45.4	1.085	499.8	7.1	802.6	1061.4	993.6	105.2	1249.8	131.8	0.971	0.911
20	299	56.0	1.212	349.9	5.4	167.4	218.0	94.2	12.0	134.0	20.2	0.868	0.956
20	299	57.1	1.188	379.8	5.9	297.0	412.2	183.6	59.0	264.5	45.8	0.911	0.914
20	299	57.8	1.173	409.8	6.4	450.0	627.4	267.9	57.1	387.4	51.4	0.875	1.014
20	299	59.8	1.133	439.8	6.8	415.9	586.8	505.3	59.8	719.6	65.2	0.904	0.979
20	299	60.9	1.113	469.8	7.3	592.6	816.8	682.3	90.9	983.1	49.3	1.013	0.981
20	299	62.4	1.087	499.8	7.8	817.5	1161.4	926.3	128.6	1374.4	107.8	0.925	0.970
20	380	70.4	1.224	349.8	5.8	166.6	205.2	97.3	27.0	125.5	25.3	0.877	1.026
20	380	72.1	1.196	379.8	6.3	305.4	404.2	178.3	21.8	244.8	24.8	1.013	1.119
20	380	73.5	1.173	409.8	6.7	531.0	707.1	327.6	39.7	442.0	46.5	1.055	1.043
20	380	75.7	1.138	439.8	7.2	416.6	585.6	473.4	62.2	710.2	88.3	0.802	0.912
20	380	77.7	1.110	469.8	7.7	694.2	925.9	908.0	188.8	1212.9	172.5	1.104	1.078
20	380	79.4	1.085	499.8	8.2	911.5	1282.1	1084.2	174.6	1580.0	163.3	0.939	1.044
21	171	18.9	1.073	349.8	3.7	65.1	44.2	35.2	3.9	23.4	3.5	0.743	0.713
21	171	19.3	1.051	379.8	4.0	154.4	122.6	84.5	8.8	72.1	10.0	0.885	0.857
21	171	19.5	1.039	409.7	4.4	271.2	215.9	163.7	16.1	129.0	19.9	0.887	0.910
21	171	20.2	1.004	439.7	4.7	320.4	247.4	396.8	50.2	308.8	36.8	0.983	0.995
21	171	20.4	0.993	469.7	5.0	428.1	382.8	540.3	65.5	486.3	39.4	1.094	1.039
21	171	20.7	0.976	499.7	5.3	585.5	523.6	717.1	76.3	636.1	91.5	0.937	0.936
21	274	30.0	1.081	349.8	4.5	111.2	89.6	63.3	7.8	51.8	6.5	0.807	1.059
21	274	30.9	1.050	379.9	4.9	273.1	217.6	164.8	14.5	133.0	8.6	1.028	0.953
21	274	31.5	1.031	409.8	5.3	463.0	408.6	281.4	17.5	249.4	19.8	0.825	0.942
21	274	32.2	1.006	439.7	5.7	412.5	354.7	492.5	57.8	432.0	41.4	0.905	0.976
21	274	32.7	0.993	469.8	6.1	562.1	495.4	679.8	74.7	612.4	98.9	0.965	0.988

21	274	33.6	0.965	499.8	6.4	852.3	800.6	1026.8	130.2	995.8	119.8	0.955	1.019
21	377	41.3	1.080	349.9	5.0	154.0	134.3	89.6	5.9	79.7	6.0	0.876	0.931
21	377	42.6	1.047	379.9	5.4	350.2	315.8	212.9	21.9	194.0	24.1	0.918	0.989
21	377	43.3	1.030	409.8	5.9	583.0	502.7	356.3	26.9	311.1	25.5	1.019	1.023
21	377	44.5	1.002	439.8	6.3	492.8	436.9	584.0	49.1	515.9	48.8	0.883	0.879
21	377	44.9	0.995	469.8	6.7	641.2	584.0	775.4	82.0	720.0	94.9	0.988	0.976
21	377	46.1	0.968	499.8	7.2	936.7	897.3	1160.9	170.1	1153.4	97.3	0.997	1.082
21	480	52.8	1.077	349.8	5.4	188.1	152.7	112.6	8.2	92.5	8.7	0.941	0.884
21	480	53.6	1.059	379.8	5.8	320.6	279.2	192.2	14.0	168.5	17.7	0.867	0.936
21	480	55.3	1.027	409.8	6.3	663.3	621.5	402.9	23.6	375.5	33.9	0.947	1.013
21	480	56.3	1.010	439.8	6.8	509.2	435.4	606.3	60.2	516.1	74.9	0.970	0.906
21	480	57.6	0.986	469.8	7.2	781.8	738.9	978.6	120.2	919.9	94.6	1.020	1.006
21	480	58.5	0.971	499.8	7.7	1035.9	971.9	1317.5	203.5	1210.0	223.7	1.038	1.023
22	188	25.1	1.026	349.8	4.2	54.9	38.1	29.7	5.4	20.0	5.1	0.642	0.704
22	188	25.4	1.012	379.8	4.6	105.7	80.6	58.2	7.1	47.0	5.7	0.805	0.781
22	188	26.2	0.984	409.8	5.0	264.0	225.9	160.1	22.7	134.9	20.8	0.910	1.025
22	188	26.7	0.966	439.8	5.3	241.7	214.9	288.9	25.9	252.9	44.7	0.952	0.918
22	188	27.0	0.954	469.8	5.7	337.7	316.0	396.8	67.1	378.4	48.7	0.898	0.928
22	188	28.1	0.917	499.8	6.0	598.0	604.4	708.6	112.5	741.8	51.0	0.928	0.932
22	301	40.1	1.027	349.9	5.0	89.5	69.2	49.6	3.4	39.8	5.6	0.878	0.956
22	301	41.0	1.004	379.8	5.4	193.5	171.2	111.9	9.2	101.5	8.7	0.926	0.952
22	301	41.9	0.983	409.8	5.8	374.8	364.0	227.1	34.5	225.0	22.4	0.828	0.861
22	301	42.8	0.964	439.8	6.3	327.2	308.1	384.2	42.3	368.7	34.7	0.928	1.006
22	301	44.0	0.938	469.8	6.7	541.1	520.3	659.9	65.4	637.9	85.4	0.858	0.933
22	301	44.9	0.919	499.8	7.1	745.0	759.2	890.7	63.5	915.0	94.0	0.985	0.986
22	414	55.2	1.027	349.8	5.5	104.4	87.2	58.2	5.5	49.9	6.1	0.828	0.903
22	414	56.6	1.002	379.8	5.9	252.8	235.4	148.4	16.1	142.1	18.3	0.978	0.968
22	414	58.0	0.978	409.8	6.4	479.6	445.8	292.4	29.4	269.7	18.2	1.026	1.033
22	414	59.1	0.960	439.8	6.9	393.3	377.0	488.1	42.6	463.5	53.6	1.025	1.036
22	414	60.2	0.942	469.8	7.3	597.8	580.0	745.9	79.1	730.2	108.0	1.070	1.060
22	414	61.9	0.916	499.8	7.8	858.7	857.3	1013.0	126.4	1030.2	90.9	0.934	0.976
22	528	70.9	1.020	349.8	5.8	136.1	114.1	76.4	5.6	67.1	6.4	0.962	1.003
22	528	72.6	0.996	379.9	6.3	311.9	286.7	191.2	28.9	180.4	30.8	0.813	0.870
22	528	73.9	0.979	409.8	6.8	553.6	529.5	338.4	42.7	330.3	47.1	1.012	0.982
22	528	75.2	0.962	439.8	7.3	442.3	426.0	562.3	106.7	550.4	111.0	0.961	0.962
22	528	77.2	0.937	469.7	7.7	686.2	679.9	844.3	200.2	851.1	195.4	0.992	1.021
22	528	79.4	0.911	499.8	8.2	979.1	984.5	1254.1	262.8	1249.3	264.0	0.981	0.976
23	185	25.2	1.022	349.8	4.4	19.2	14.3	8.8	2.2	6.0	1.9	0.465	0.569
23	185	25.8	0.995	379.8	4.8	54.4	46.0	29.4	3.7	25.8	4.5	0.741	0.805
23	185	25.9	0.992	409.8	5.2	90.2	89.8	50.6	6.3	53.4	8.4	0.752	0.915
23	185	26.9	0.954	439.8	5.6	125.6	133.7	138.8	25.1	152.5	17.3	0.832	0.958
23	185	27.2	0.945	469.8	6.0	202.2	214.0	238.8	27.1	262.3	45.7	0.978	1.020

23	185	27.7	0.929	499.7	6.3	292.3	360.9	349.1	32.7	449.7	40.2	0.975	0.978
23	295	40.4	1.015	349.9	5.2	40.4	34.5	20.1	2.7	18.5	3.2	0.879	0.865
23	295	40.9	1.002	379.8	5.6	84.9	78.8	46.2	8.6	46.8	7.5	0.890	0.860
23	295	42.0	0.977	409.8	6.1	206.1	216.5	120.9	18.7	132.6	17.2	0.963	0.962
23	295	42.7	0.960	439.8	6.5	185.0	199.2	214.5	22.1	241.4	30.7	0.938	1.059
23	295	43.3	0.947	469.8	7.0	273.8	313.1	328.4	29.2	395.7	29.9	0.961	1.040
23	295	45.4	0.904	499.7	7.4	565.6	632.4	677.9	60.6	752.0	53.8	0.964	0.955
23	406	55.5	1.017	349.9	5.6	50.4	44.6	26.7	4.8	24.9	4.9	0.834	0.942
23	406	56.6	0.997	379.8	6.1	117.9	119.4	67.2	6.3	70.7	10.3	0.898	1.007
23	406	57.9	0.975	409.8	6.6	246.6	259.2	147.4	20.4	160.4	20.2	0.978	0.991
23	406	59.1	0.955	439.8	7.1	234.9	253.9	269.4	34.7	299.9	53.8	0.902	0.973
23	406	60.0	0.939	469.8	7.5	343.6	391.0	394.2	55.8	467.3	50.7	0.925	1.016
23	406	61.7	0.914	499.7	8.0	585.2	679.8	737.1	86.4	862.8	115.7	1.026	1.042
23	517	70.8	1.015	349.8	5.9	57.5	51.3	30.0	4.2	28.5	4.6	0.707	0.767
23	517	72.3	0.994	379.8	6.4	136.2	142.1	79.5	15.3	87.8	17.2	0.783	0.886
23	517	74.1	0.969	409.8	6.9	328.3	343.3	205.2	46.9	220.9	42.9	0.939	0.985
23	517	75.7	0.949	439.8	7.4	270.7	289.4	320.7	41.9	344.7	25.9	0.896	0.922
23	517	76.7	0.936	469.8	8.0	394.7	436.7	473.0	49.7	524.5	48.3	0.956	0.915
23	517	78.3	0.917	499.8	8.5	621.3	720.7	760.3	108.9	886.3	104.6	0.940	0.983
24	127	25.0	0.893	349.9	4.1	81.3	137.2	43.1	8.5	82.0	15.1	0.795	0.974
24	127	25.3	0.884	379.9	4.5	132.4	226.2	70.1	14.5	135.9	17.0	0.783	0.980
24	127	26.1	0.856	409.8	4.9	314.0	549.9	179.9	23.2	327.0	43.9	0.946	1.091
24	127	26.6	0.840	439.8	5.2	255.6	434.3	288.8	47.8	515.1	64.3	0.901	0.914
24	127	27.1	0.825	469.9	5.6	393.0	626.4	473.0	74.6	795.0	111.7	1.009	1.072
24	127	27.9	0.802	499.8	5.9	600.4	968.4	713.4	142.2	1213.9	175.5	0.858	1.020
24	204	40.0	0.898	349.8	4.9	131.1	206.5	74.9	11.1	125.4	18.2	0.754	0.826
24	204	41.4	0.868	379.9	5.3	318.5	512.9	192.7	25.1	317.4	25.6	1.040	0.925
24	204	41.8	0.859	409.8	5.8	458.6	740.6	275.4	39.8	461.1	63.9	1.033	1.017
24	204	43.2	0.831	439.8	6.2	445.9	672.2	539.0	74.1	805.5	99.3	1.028	1.004
24	204	43.6	0.823	469.8	6.6	551.0	859.3	639.8	111.6	1044.7	190.6	0.907	0.954
24	204	44.9	0.800	499.7	7.0	771.1	1216.2	939.0	125.3	1501.3	145.5	0.917	0.972
24	280	55.1	0.894	349.8	5.4	186.3	284.3	108.0	11.0	178.2	16.2	0.916	0.947
24	280	56.6	0.870	379.8	5.8	370.7	582.8	227.1	47.4	375.6	55.7	0.937	0.926
24	280	57.7	0.853	409.8	6.3	648.0	992.4	398.5	63.2	609.5	85.7	0.812	0.950
24	280	59.5	0.828	439.8	6.8	516.0	802.0	615.5	63.3	1001.8	131.2	0.981	1.023
24	280	60.4	0.815	469.8	7.2	639.3	1040.4	770.5	148.7	1317.9	128.8	0.897	1.008
24	280	62.4	0.789	499.8	7.7	1056.0	1583.8	1289.4	301.0	1992.7	318.5	0.984	1.007
24	356	70.4	0.889	349.8	5.7	222.0	348.9	132.7	15.4	211.2	19.0	0.865	0.998
24	356	71.8	0.873	379.9	6.2	385.1	603.0	231.2	35.7	370.5	36.9	0.879	0.932
24	356	73.6	0.851	409.8	6.7	664.6	1027.6	402.5	43.6	646.2	50.7	0.962	1.007
24	356	75.5	0.829	439.8	7.2	570.9	864.0	695.3	139.9	1078.7	195.1	0.955	1.038
24	356	77.4	0.809	469.8	7.7	783.1	1170.7	973.9	206.5	1445.4	171.9	0.979	0.995

24	356	79.5	0.788	499.7	8.1	1074.8	1624.4	1330.7	259.7	1960.2	235.5	0.965	0.970
25	141	25.0	0.948	349.8	4.1	110.5	186.9	60.0	10.6	110.4	19.0	0.905	0.951
25	141	25.5	0.931	379.8	4.5	225.6	367.8	135.4	15.1	230.6	17.4	1.072	0.999
25	141	26.4	0.897	409.8	4.8	491.3	754.5	305.5	44.5	454.7	33.4	0.896	1.127
25	141	26.8	0.884	439.7	5.2	328.9	569.7	384.9	72.0	709.7	71.9	0.845	0.975
25	141	27.0	0.876	469.8	5.5	467.4	715.4	580.0	102.4	853.4	117.0	1.019	0.929
25	141	27.6	0.857	499.8	5.9	673.1	1018.8	848.6	109.7	1236.5	224.2	1.021	0.945
25	225	39.8	0.949	349.8	4.9	203.1	308.2	115.8	12.2	185.3	22.5	1.058	1.146
25	225	40.6	0.931	379.8	5.3	356.4	551.2	215.9	42.1	348.7	41.7	0.927	0.967
25	225	41.8	0.903	409.8	5.7	608.1	938.0	374.8	21.1	579.6	53.0	1.045	1.009
25	225	43.1	0.877	439.8	6.1	522.3	771.6	621.8	71.6	942.8	114.2	0.992	0.986
25	225	44.1	0.856	469.8	6.6	797.2	1101.2	973.3	97.1	1356.3	154.2	1.015	1.014
25	225	45.3	0.835	499.8	7.0	1061.0	1518.8	1277.8	106.2	1878.3	199.5	0.976	1.009
25	309	55.1	0.943	349.8	5.4	279.4	405.4	167.8	22.8	248.3	30.0	1.032	1.130
25	309	56.0	0.927	379.8	5.8	456.2	671.5	284.5	52.7	418.8	44.9	0.782	0.906
25	309	57.9	0.897	409.8	6.3	782.7	1178.9	460.3	57.9	731.8	76.3	1.084	0.974
25	309	59.2	0.877	439.8	6.7	643.5	923.5	835.7	192.6	1220.4	240.1	1.054	1.019
25	309	60.3	0.862	469.8	7.2	814.4	1185.4	999.8	150.3	1449.2	151.7	0.983	1.010
25	309	61.6	0.843	499.8	7.7	1074.3	1566.7	1380.8	220.4	2020.8	247.6	1.019	1.049
25	394	70.4	0.940	349.8	5.7	319.8	462.6	198.2	31.6	286.5	23.7	1.032	1.080
25	394	71.6	0.925	379.8	6.2	514.4	774.3	306.2	41.5	473.0	19.3	0.948	0.926
25	394	73.4	0.901	409.8	6.7	881.5	1235.8	534.1	52.9	752.3	61.6	1.100	1.072
25	394	75.1	0.882	439.8	7.1	645.9	949.2	800.0	97.1	1199.3	161.5	0.990	1.033
25	394	76.9	0.861	469.8	7.6	941.9	1301.8	1173.9	254.6	1647.1	298.7	1.045	1.047
25	394	79.2	0.836	499.8	8.1	1284.2	1760.3	1649.2	252.5	2259.8	296.7	1.035	1.027
26	122	25.1	1.177	349.8	4.2	117.3	172.0	63.5	12.2	101.3	17.3	0.801	1.064
26	122	25.7	1.150	379.8	4.5	238.8	386.2	140.3	24.6	240.0	26.8	0.875	1.053
26	122	26.1	1.129	409.8	4.9	403.5	620.7	243.7	35.3	379.0	57.2	0.959	0.991
26	122	26.7	1.107	439.8	5.2	317.4	450.4	378.4	66.3	558.5	108.4	0.951	1.002
26	122	27.6	1.068	469.8	5.6	524.9	792.4	655.3	95.0	985.7	178.7	1.026	0.973
26	122	28.6	1.031	499.8	5.9	807.0	1207.1	991.2	113.0	1488.1	207.6	1.019	0.934
26	195	40.2	1.173	349.8	4.9	198.6	298.7	112.9	13.2	183.4	24.6	0.945	0.956
26	195	41.1	1.147	379.8	5.3	349.9	538.5	196.9	20.6	330.9	48.8	1.006	1.047
26	195	42.1	1.122	409.8	5.8	606.9	917.5	374.7	63.2	562.3	58.4	0.854	1.016
26	195	43.4	1.089	439.8	6.2	487.0	716.8	585.4	109.5	867.6	112.3	0.998	0.986
26	195	44.3	1.065	469.7	6.6	719.8	1063.0	881.9	95.8	1299.1	123.1	0.975	0.968
26	195	45.7	1.032	499.7	7.0	1006.7	1490.2	1202.4	148.7	1788.9	178.0	0.939	0.985
26	268	55.4	1.170	349.8	5.4	237.4	350.3	129.4	14.4	207.2	23.3	0.953	1.047
26	268	56.5	1.148	379.8	5.8	428.7	619.9	254.6	37.9	381.7	46.1	1.038	0.956
26	268	57.7	1.125	409.8	6.3	671.6	974.5	410.6	77.7	603.0	84.5	1.013	0.978
26	268	59.1	1.098	439.8	6.8	521.9	778.8	675.9	173.6	996.1	207.1	1.017	1.068
26	268	60.2	1.077	469.8	7.2	777.2	1093.7	972.2	219.1	1346.1	179.2	1.087	1.057

26	268	62.3	1.040	499.8	7.7	1129.2	1610.8	1414.1	265.9	2020.6	295.0	1.045	1.032
26	342	70.4	1.175	349.9	5.7	266.5	375.3	164.7	38.6	234.5	23.0	0.903	0.917
26	342	71.8	1.153	379.8	6.2	452.7	657.0	262.6	47.5	395.2	51.2	1.103	1.057
26	342	73.6	1.125	409.8	6.7	709.2	1073.1	416.6	54.7	652.9	63.7	0.884	0.987
26	342	75.4	1.098	439.8	7.2	564.7	825.2	687.5	83.9	1008.6	85.1	0.967	0.976
26	342	77.2	1.072	469.8	7.7	755.0	1137.4	957.9	185.1	1414.0	143.4	0.978	1.066
26	342	79.3	1.044	499.8	8.2	1085.7	1601.2	1333.7	123.9	2008.3	145.1	0.894	0.949
27	144	18.8	1.022	349.9	3.6	156.6	144.7	88.6	10.8	83.0	11.1	0.901	0.914
27	144	18.9	1.016	379.8	3.9	258.4	237.7	153.4	16.8	147.8	24.2	0.846	0.780
27	144	19.4	0.992	409.8	4.3	500.9	470.3	299.7	44.3	286.4	60.2	0.905	0.798
27	144	19.9	0.964	439.8	4.6	504.8	474.3	622.5	85.3	585.6	66.2	0.928	0.949
27	144	20.2	0.953	469.8	4.9	655.8	618.5	802.8	123.8	769.5	130.8	1.003	0.975
27	144	20.6	0.933	499.7	5.2	903.3	897.7	1142.8	166.5	1150.6	186.6	1.016	1.022
27	231	30.0	1.027	349.8	4.4	268.3	261.0	164.9	24.9	161.0	17.5	0.913	0.908
27	231	30.5	1.010	379.8	4.8	468.7	463.4	279.2	32.9	282.7	17.3	1.008	1.083
27	231	31.0	0.995	409.9	5.2	742.3	715.6	464.6	38.9	454.6	43.8	0.939	0.897
27	231	32.1	0.961	439.8	5.5	655.5	642.4	813.2	94.3	803.9	81.5	1.033	1.011
27	231	32.8	0.942	469.8	5.9	914.0	859.0	1148.8	109.5	1079.4	125.1	1.005	1.004
27	231	33.2	0.930	499.8	6.3	1149.3	1205.0	1398.1	141.0	1523.8	131.3	0.950	1.036
27	317	40.9	1.037	349.9	4.9	282.3	263.6	168.2	22.2	159.8	16.9	0.943	1.007
27	317	42.1	1.006	379.8	5.3	591.1	565.9	356.7	34.8	344.0	25.1	1.012	1.029
27	317	43.0	0.985	409.8	5.8	966.9	964.9	610.7	55.3	599.2	40.8	0.979	1.084
27	317	43.9	0.966	439.8	6.2	697.2	700.0	844.1	67.2	833.6	80.0	0.990	0.948
27	317	44.9	0.942	469.8	6.6	1002.8	984.3	1228.1	174.9	1191.7	160.5	1.032	1.006
27	317	46.1	0.919	499.8	7.0	1454.6	1428.7	1821.7	189.8	1786.9	219.1	0.985	1.039
27	404	52.0	1.039	349.8	5.3	311.7	294.8	187.8	24.6	176.1	24.1	1.003	1.042
27	404	53.4	1.011	379.8	5.7	592.5	591.3	359.3	41.8	362.6	44.5	0.943	0.983
27	404	54.1	0.998	409.8	6.2	873.5	881.8	537.9	31.2	536.3	47.4	0.804	0.983
27	404	55.8	0.968	439.8	6.6	737.5	756.7	888.4	128.8	932.9	94.5	0.889	0.917
27	404	56.8	0.950	469.8	7.1	1016.2	992.2	1255.0	172.3	1239.8	168.6	0.933	0.974
27	404	58.7	0.920	499.7	7.5	1453.5	1483.8	1819.3	250.5	1833.4	148.1	1.000	0.940
28	163	24.8	1.000	349.8	4.1	111.1	100.8	64.3	8.0	57.5	6.3	0.907	0.923
28	163	25.5	0.971	379.9	4.5	282.0	278.1	165.6	7.7	164.9	16.7	0.960	1.100
28	163	26.1	0.949	409.8	4.9	510.1	537.6	297.3	21.5	328.3	47.8	0.998	0.908
28	163	26.4	0.939	439.8	5.2	393.0	388.9	483.6	80.0	493.2	66.8	0.897	0.928
28	163	27.2	0.913	469.8	5.6	599.3	680.1	716.6	63.7	831.9	65.2	0.903	0.947
28	163	27.9	0.889	499.7	5.9	976.8	1049.1	1183.2	218.5	1253.9	171.5	0.928	0.995
28	261	40.1	0.990	349.8	4.9	204.0	206.6	117.3	11.6	123.0	16.5	0.908	0.902
28	261	40.9	0.970	379.8	5.3	427.4	416.3	260.2	32.5	256.7	33.4	0.902	0.895
28	261	41.9	0.948	409.8	5.7	691.2	717.5	421.4	49.6	436.1	44.4	0.905	0.934
28	261	42.5	0.935	439.9	6.2	517.4	565.0	614.1	85.9	696.3	56.8	0.915	0.952
28	261	43.8	0.908	469.7	6.6	841.8	859.6	1065.4	199.7	1066.1	217.5	0.989	0.942

28	261	44.3	0.896	500.0	7.0	1028.3	1140.9	1289.6	164.0	1422.7	164.3	0.944	0.975
28	359	54.5	1.002	349.8	5.4	197.8	206.2	114.4	14.5	124.4	15.9	0.871	0.854
28	359	56.4	0.968	379.9	5.8	542.7	569.0	336.6	77.4	363.0	79.8	1.107	1.096
28	359	57.7	0.946	409.8	6.3	816.5	863.8	491.6	46.1	527.1	15.6	0.842	0.909
28	359	58.6	0.931	439.8	6.8	637.5	654.4	777.6	180.7	805.8	182.0	1.016	1.005
28	359	60.3	0.906	469.8	7.2	914.2	959.0	1161.1	132.2	1188.6	167.8	1.064	1.011
28	359	62.4	0.875	499.8	7.7	1321.1	1463.8	1590.0	147.4	1765.3	191.3	1.029	0.976
28	457	69.9	0.995	349.8	5.7	242.3	256.5	141.2	17.9	152.8	15.8	0.978	1.012
28	457	72.1	0.965	379.8	6.2	553.2	595.8	338.2	17.0	371.6	26.4	0.910	0.951
28	457	73.4	0.947	409.9	6.7	1001.7	1050.6	660.1	155.1	688.3	137.9	0.776	0.788
28	457	75.3	0.923	439.8	7.2	813.2	853.2	1048.2	245.7	1109.0	245.3	1.062	1.065
28	457	77.0	0.903	469.8	7.7	1033.0	1117.6	1301.5	176.6	1394.8	199.5	1.077	1.061
28	457	77.9	0.892	499.8	8.1	1289.6	1378.4	1576.7	217.6	1701.6	95.0	0.959	0.988
29	161	25.2	0.985	349.8	4.4	53.0	63.1	28.6	3.4	36.2	4.2	0.965	0.964
29	161	25.5	0.973	379.8	4.7	100.9	134.4	56.4	9.1	77.8	8.4	0.750	0.977
29	161	26.2	0.949	409.8	5.1	244.6	333.5	147.3	20.6	201.9	27.5	0.880	1.082
29	161	26.5	0.937	439.8	5.5	190.7	260.3	216.7	37.4	308.6	57.3	0.847	0.917
29	161	27.2	0.913	469.8	5.8	353.7	460.9	429.3	43.8	571.0	84.3	0.936	1.014
29	161	28.1	0.884	499.7	6.2	545.6	749.2	674.4	133.3	919.6	92.2	0.973	0.971
29	257	40.2	0.986	349.8	5.1	89.4	110.0	48.4	9.5	62.8	8.0	0.885	0.910
29	257	40.8	0.970	379.8	5.5	171.4	231.8	98.6	6.0	135.4	17.1	0.990	1.040
29	257	41.6	0.951	409.8	6.0	346.6	425.8	204.7	15.4	258.4	13.6	1.157	1.014
29	257	42.6	0.929	439.8	6.4	305.7	391.2	353.4	21.7	470.7	27.7	0.828	0.894
29	257	43.1	0.918	469.8	6.8	427.6	561.6	512.0	78.2	700.8	87.7	0.927	1.017
29	257	44.8	0.885	499.8	7.3	722.7	925.2	884.1	100.0	1136.9	138.4	0.997	1.038
29	354	55.3	0.987	349.9	5.5	108.4	133.4	60.0	8.5	78.2	13.7	0.762	0.842
29	354	56.0	0.974	379.8	6.0	206.6	262.8	122.1	13.7	155.1	14.0	0.898	1.011
29	354	56.9	0.959	409.8	6.5	354.0	464.7	204.7	24.8	275.7	22.9	0.864	0.907
29	354	58.7	0.930	439.7	7.0	355.5	462.2	410.0	48.7	547.1	61.3	0.865	0.896
29	354	60.1	0.908	469.8	7.4	547.9	711.9	649.4	67.5	865.4	112.8	0.966	0.969
29	354	61.5	0.888	499.8	7.9	764.2	964.2	914.5	96.3	1143.0	101.8	0.952	0.984
29	450	70.3	0.987	349.9	5.8	124.7	151.4	72.2	11.5	90.8	13.0	0.941	0.980
29	450	71.2	0.975	379.9	6.4	224.7	289.6	135.1	28.3	175.8	35.2	0.855	0.931
29	450	73.2	0.948	409.8	6.9	449.6	580.3	268.2	20.9	351.9	12.6	0.969	0.976
29	450	74.7	0.928	439.8	7.4	389.9	507.5	462.4	70.6	619.9	41.3	0.930	0.972
29	450	75.9	0.914	469.8	7.9	574.3	702.8	713.5	190.1	878.4	142.8	0.997	0.991
29	450	78.3	0.886	499.8	8.4	894.6	1149.0	1123.8	177.3	1459.7	276.5	0.952	0.988