

Example of ratings table with randomly generated data

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§1 All ratings

Prob	U	M	A	N	E	Avg	Prob	1	1.5	2	2.5	3	Avg
A-01 $\theta: \mathbb{Z}[x] \rightarrow \mathbb{Z}$	1	1	2	1	2	+0.39	A-01	2	2	1	2	0	1.714
A-02 $\sqrt[3]{\frac{a}{b+7}}$	0	0	4	5	6	+0.93	A-02	0	3	1	4	0	2.062
A-03 $a^a b^b c^c$	0	1	3	4	3	+0.73	A-03	4	1	4	1	0	1.600
C-04 $a + 2b + \dots + 32c$	0	0	1	2	1	+0.88	C-04	2	3	1	1	0	1.571
C-05 2017-vtx dinner	0	1	1	1	1	+0.50	C-05	0	0	2	2	4	2.625
G-06 ST orthog	0	0	2	4	6	+1.08	G-06	0	0	0	1	4	2.900
G-07 $PO \perp YZ$	0	2	5	4	5	+0.66	G-07	0	1	3	3	3	2.400
G-08 Area $5/2$	2	2	3	1	0	-0.19	G-08	3	1	3	0	0	1.500
G-09 $XD \cap AM$ on Γ	1	0	1	1	2	+0.65	G-09	0	1	3	2	3	2.389
G-10 $\angle PQE, \angle PQF = 90^\circ$	0	2	2	1	1	+0.25	G-10	3	0	2	0	0	1.400
N-11 5^n has six zeros	0	2	3	3	2	+0.50	N-11	4	0	0	0	0	1.000
N-12 $n^2 \mid b^n + 1$	0	2	6	5	3	+0.53	N-12	2	2	1	2	0	1.714
N-13 fff cycles	0	1	1	1	1	+0.50	N-13	0	0	2	0	3	2.600

§2 Beauty contest, by overall popularity

Prob	U	M	A	N	E	Avg	Prob	1	1.5	2	2.5	3	Avg
G-06 ST orthog	0	0	2	4	6	+1.08	G-06	0	0	0	1	4	2.900
A-02 $\sqrt[3]{\frac{a}{b+7}}$	0	0	4	5	6	+0.93	A-02	0	3	1	4	0	2.062
C-04 $a + 2b + \dots + 32c$	0	0	1	2	1	+0.88	C-04	2	3	1	1	0	1.571
A-03 $a^a b^b c^c$	0	1	3	4	3	+0.73	A-03	4	1	4	1	0	1.600
G-07 $PO \perp YZ$	0	2	5	4	5	+0.66	G-07	0	1	3	3	3	2.400
G-09 $XD \cap AM$ on Γ	1	0	1	1	2	+0.65	G-09	0	1	3	2	3	2.389
N-12 $n^2 \mid b^n + 1$	0	2	6	5	3	+0.53	N-12	2	2	1	2	0	1.714
C-05 2017-vtx dinner	0	1	1	1	1	+0.50	C-05	0	0	2	2	4	2.625
N-11 5^n has six zeros	0	2	3	3	2	+0.50	N-11	4	0	0	0	0	1.000
N-13 fff cycles	0	1	1	1	1	+0.50	N-13	0	0	2	0	3	2.600
A-01 $\theta: \mathbb{Z}[x] \rightarrow \mathbb{Z}$	1	1	2	1	2	+0.39	A-01	2	2	1	2	0	1.714
G-10 $\angle PQE, \angle PQF = 90^\circ$	0	2	2	1	1	+0.25	G-10	3	0	2	0	0	1.400
G-08 Area $5/2$	2	2	3	1	0	-0.19	G-08	3	1	3	0	0	1.500

§3 Beauty contest, by subject and popularity

Prob	U	M	A	N	E	Avg	Prob	1	1.5	2	2.5	3	Avg
A-02 $\sqrt[3]{\frac{a}{b+7}}$	0	0	4	5	6	+0.93	A-02	0	3	1	4	0	2.062
A-03 $a^a b^b c^c$	0	1	3	4	3	+0.73	A-03	4	1	4	1	0	1.600
A-01 $\theta: \mathbb{Z}[x] \rightarrow \mathbb{Z}$	1	1	2	1	2	+0.39	A-01	2	2	1	2	0	1.714
C-04 $a + 2b + \dots + 32c$	0	0	1	2	1	+0.88	C-04	2	3	1	1	0	1.571
C-05 2017-vtx dinner	0	1	1	1	1	+0.50	C-05	0	0	2	2	4	2.625
G-06 ST orthog	0	0	2	4	6	+1.08	G-06	0	0	0	1	4	2.900
G-07 $PO \perp YZ$	0	2	5	4	5	+0.66	G-07	0	1	3	3	3	2.400
G-09 $XD \cap AM$ on Γ	1	0	1	1	2	+0.65	G-09	0	1	3	2	3	2.389
G-10 $\angle PQE, \angle PQF = 90^\circ$	0	2	2	1	1	+0.25	G-10	3	0	2	0	0	1.400
G-08 Area $5/2$	2	2	3	1	0	-0.19	G-08	3	1	3	0	0	1.500
N-12 $n^2 \mid b^n + 1$	0	2	6	5	3	+0.53	N-12	2	2	1	2	0	1.714
N-11 5^n has six zeros	0	2	3	3	2	+0.50	N-11	4	0	0	0	0	1.000
N-13 fff cycles	0	1	1	1	1	+0.50	N-13	0	0	2	0	3	2.600

§4 Beauty contest, by overall difficulty

Prob	U	M	A	N	E	Avg	Prob	1	1.5	2	2.5	3	Avg
G-06	0	0	2	4	6	+1.08	G-06 ST orthog	0	0	0	1	4	2.900
C-05	0	1	1	1	1	+0.50	C-05 2017-vtx dinner	0	0	2	2	4	2.625
N-13	0	1	1	1	1	+0.50	N-13 fff cycles	0	0	2	0	3	2.600
G-07	0	2	5	4	5	+0.66	G-07 $PO \perp YZ$	0	1	3	3	3	2.400
G-09	1	0	1	1	2	+0.65	G-09 $XD \cap AM$ on Γ	0	1	3	2	3	2.389
A-02	0	0	4	5	6	+0.93	A-02 $\sqrt[3]{\frac{a}{b+7}}$	0	3	1	4	0	2.062
A-01	1	1	2	1	2	+0.39	A-01 $\theta: \mathbb{Z}[x] \rightarrow \mathbb{Z}$	2	2	1	2	0	1.714
N-12	0	2	6	5	3	+0.53	N-12 $n^2 \mid b^n + 1$	2	2	1	2	0	1.714
A-03	0	1	3	4	3	+0.73	A-03 $a^a b^b c^c$	4	1	4	1	0	1.600
C-04	0	0	1	2	1	+0.88	C-04 $a + 2b + \dots + 32c$	2	3	1	1	0	1.571
G-08	2	2	3	1	0	-0.19	G-08 Area $5/2$	3	1	3	0	0	1.500
G-10	0	2	2	1	1	+0.25	G-10 $\angle PQE, \angle PQF = 90^\circ$	3	0	2	0	0	1.400
N-11	0	2	3	3	2	+0.50	N-11 5^n has six zeros	4	0	0	0	0	1.000

§5 Beauty contest, by subject and difficulty

Prob	U	M	A	N	E	Avg	Prob	1	1.5	2	2.5	3	Avg
A-02	0	0	4	5	6	+0.93	A-02 $\sqrt[3]{\frac{a}{b+7}}$	0	3	1	4	0	2.062
A-01	1	1	2	1	2	+0.39	A-01 $\theta: \mathbb{Z}[x] \rightarrow \mathbb{Z}$	2	2	1	2	0	1.714
A-03	0	1	3	4	3	+0.73	A-03 $a^a b^b c^c$	4	1	4	1	0	1.600
C-05	0	1	1	1	1	+0.50	C-05 2017-vtx dinner	0	0	2	2	4	2.625
C-04	0	0	1	2	1	+0.88	C-04 $a + 2b + \dots + 32c$	2	3	1	1	0	1.571
G-06	0	0	2	4	6	+1.08	G-06 ST orthog	0	0	0	1	4	2.900
G-07	0	2	5	4	5	+0.66	G-07 $PO \perp YZ$	0	1	3	3	3	2.400
G-09	1	0	1	1	2	+0.65	G-09 $XD \cap AM$ on Γ	0	1	3	2	3	2.389
G-08	2	2	3	1	0	-0.19	G-08 Area $5/2$	3	1	3	0	0	1.500
G-10	0	2	2	1	1	+0.25	G-10 $\angle PQE, \angle PQF = 90^\circ$	3	0	2	0	0	1.400
N-13	0	1	1	1	1	+0.50	N-13 fff cycles	0	0	2	0	3	2.600
N-12	0	2	6	5	3	+0.53	N-12 $n^2 \mid b^n + 1$	2	2	1	2	0	1.714
N-11	0	2	3	3	2	+0.50	N-11 5^n has six zeros	4	0	0	0	0	1.000

§6 Scatter plot

