

# LAW OF LARGE NUMBERS

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Toss a coin 50 times in a row and count the number of "heads".

Let  $m$  = number of "heads" in the first  $n$  tosses. After each toss calculate the relative

frequency  $f_{\text{heads}}(n) = \frac{m}{n}$  and plot a dot in a

coordinate system as the one below and finally draw a line from one dot to the next one.



n	m	f	n	m	f	n	m	f	n	m	f	n	m	f
1	0	0	11	6	0.55	21	10	0.48	31	14	0.45	41	18	0.44
2	1	0.5	12	7	0.58	22	10	0.45	32	14	0.44	42	19	0.45
3	2	0.67	13	7	0.54	23	10	0.43	33	15	0.45	43	20	0.47
4	2	0.5	14	7	0.5	24	10	0.42	34	16	0.47	44	21	0.48
5	3	0.6	15	7	0.47	25	10	0.4	35	16	0.46	45	22	0.49
6	3	0.5	16	8	0.5	26	11	0.42	36	16	0.44	46	23	0.5
7	3	0.43	17	8	0.47	27	11	0.41	37	16	0.43	47	23	0.49
8	4	0.5	18	9	0.5	28	11	0.39	38	17	0.45	48	23	0.48
9	4	0.44	19	10	0.53	29	12	0.41	39	17	0.44	49	24	0.49
10	5	0.5	20	10	0.5	30	13	0.43	40	18	0.45	50	24	0.48

