

1.3.4 Confidence interval

Standardized score is measure of relative standing.

Normal approximation to the sampling distribution of \bar{X}

1.3.5 Confidence Interval estimation

A coin is tossed 10 times and heads appears 8 times. What are the chances of error this large if the coin is known to be unbiased? Perform both one-sided and two-sided analysis.

An unbiased coin is tossed 100 times. What is its 95% confidence interval?

How many times a biased coin should be tossed so that the fraction of heads falls between 0.35 to 0.45 with 90% confidence?

Inverse Normal Table

0.50	0.0000	0.30	0.5244	0.10	1.2816
0.49	0.0251	0.29	0.5534	0.09	1.3408
0.48	0.0502	0.28	0.5828	0.08	1.4051
0.47	0.0753	0.27	0.6128	0.07	1.4758
0.46	0.1004	0.26	0.6433	0.06	1.5548
0.45	0.1257	0.25	0.6745	0.05	1.6449
0.44	0.1510	0.24	0.7063	0.04	1.7507
0.43	0.1764	0.23	0.7388	0.03	1.8808
0.42	0.2019	0.22	0.7722	0.025	1.9600
0.41	0.2275	0.21	0.8064	0.02	2.0537
0.40	0.2533	0.20	0.8416	0.01	2.3263
0.39	0.2793	0.19	0.8779	0.009	2.3656
0.38	0.3055	0.18	0.9154	0.008	2.4089
0.37	0.3319	0.17	0.9542	0.007	2.4573
0.36	0.3585	0.16	0.9945	0.006	2.5121
0.35	0.3853	0.15	1.0364	0.005	2.5758
0.34	0.4125	0.14	1.0803	0.004	2.6521
0.33	0.4399	0.13	1.1264	0.003	2.7478
0.32	0.4677	0.12	1.1750	0.002	2.8782
0.31	0.4959	0.11	1.2265	0.001	3.0902