1. Suppose that you have tossed a coin – which may or may not be balanced – five times and reported the outcomes 1, 0, 0, 1, and 1, with Heads coded 1’s and Tails by 0’s.
2. Calculate the sample proportion of Heads.
3. Construct 95% (asymptotic) interval for the population probability of Heads.

The equation for a confidence interval with 95% confidence is,

And the standard deviation of the population sample is,

Then,

Therefore, the 95% confidence interval is

1. Construct a conservative 95% (asymptotic) confidence interval for the population probability of Heads.

The conservative assumption is

Then,

Therefore, the 95% conservative confidence interval is