Two Sample Proportion Test

Objective: Compare proportions between two groups

A researcher wants to investigate the effectiveness of an outreach program to increase the proportion of women with abnormal Pap smears who return for follow up care. She plans to randomize participants into two groups: one to receive the standard program and the other to receive the enhanced outreach program. Under the standard program, about 60% of the women return for a follow up within 6 months. The investigator thinks an increase in the proportion of women receiving follow up care to 75% would be a clinically-meaningful change. She wants to detect a difference at least this large with 80% power with a significance level of 5%.

Required Information	Inputs
What is the desired power for the test?	80%
At what significance level do you want to test your hypothesis?	5%
What is the proportion of successes for the control group?	0.60
What is the minimum proportion of success for the intervention group that that you want to be able to detect?	0.75
Is your hypothesis one-sided or two-sided?	Two-sided
What will the ratio of samples be in the intervention group to the control group?	1:1

Statistical Tools

A total sample size of at least 330 is necessary, meaning 165 participants in each group.

Example using the Southwest Oncology Group's Statistical Tools (https://stattools.crab.org/)