Click on ‘Determine’ to get the additional parameters window

Power Plot

Mean H0 100

Mean H1 105

SD σ 15

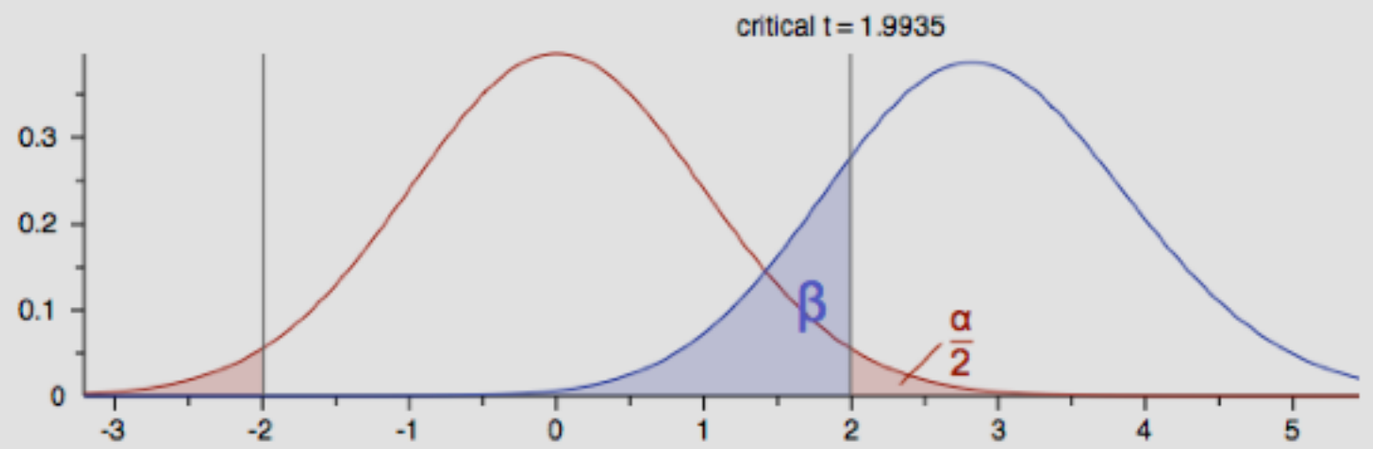
Calculate Effect size d 0.3333333

Calculate and transfer to main window

Close effect size drawer

G*Power 3

Central and noncentral distributions | Protocol of power analyses



Test family: t tests

Statistical test: Means: Difference from constant (one sample case)

Type of power analysis: A priori: Compute required sample size – given α, power, and effect size

Input parameters

Determine

Tail(s): Two

Effect size d: 0.3333333

α err prob: 0.05

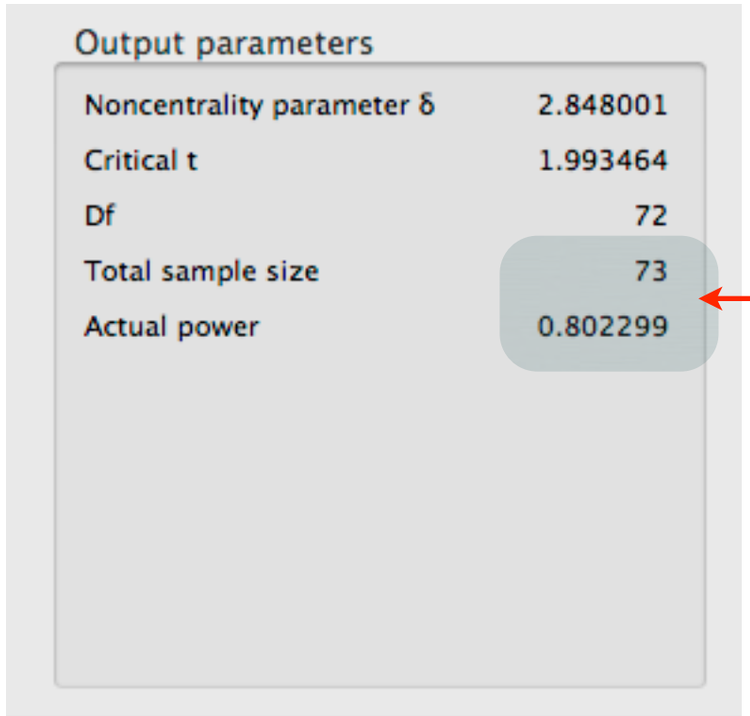
Power (1–β err prob): .8

Output parameters

Noncentrality parameter δ	2.848001
Critical t	1.993464
Df	72
Total sample size	73
Actual power	0.802299

X-Y plot for a range of values

Calculate



So according to G*Power, we need a sample size of 73 for a Power of just greater than 0.8

When we calculated sample size manually, we worked it out to be 72. Why the difference? This is because of rounding error. In G*Power, if we select the Power level to be 0.795 (which we would round up to 0.8), it calculates our sample size as 72.