

Workbook



Table of Contents

Confidence Intervals for Comparing Two Proportions	2
Confidence Intervals for Comparing Two Proportions	2

Confidence Intervals for Comparing Two Proportions

Confidence Intervals for Comparing Two Proportions

Questions

- 1) 45 of 150 randomly sampled women support a new policy. 50 of 200 randomly sampled men support the policy. Construct a 95% confidence interval for the difference between the proportion of women supporting the bill and the proportion of men.
- 2) 200 patients with chronic pain took part in a medical study. They were divided randomly into two equal size groups, and each group took a different medication. 90 of those in Group 1 said their situation improved and 70 of those in Group 2 said their situation improved. Construct a 95% confidence interval for the difference between the success rates in the two groups. Can we conclude that there is a difference in the success rates of the two drugs?
- 3) 200 families from Western Pennsylvania were randomly sampled, 70% of whom had a videogame console. 300 families from Eastern Pennsylvania were sample, 65% of whom had a videogame console. Construct a 95% confidence interval for the difference in proportions of families with videogame consoles between Western and Eastern Pennsylvania.

Answer Key:

- 1) $-0.0448 < p_1 - p_2 < 0.14476$
- 2) $0.093 < p_A - p_B < 0.307$
- 3) $-0.033 < p_1 - p_2 < 0.133$