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Mat-258

Lab #2

1. Construct a 95% confidence interval for the differences between the population proportions of the two groups. What can you conclude?

We have x1 =132, n1 = 200, x2 = 84, n2 = 120.

Difference = p (1) - p (2)

Estimate for difference: -0.04

95% CI for difference: (-0.145037, 0.0650365)

Test for difference = 0 (vs ≠ 0): Z = -0.75 P-Value = 0.455

Fisher’s exact test: P-Value = 0.538

Since we have that zero is caught in the interval, we can conclude that there is not a significant difference between the city school district students and the ones from other district.

1. Use a 0.05 significance level to test the claim that the population proportion of city school district students passing the test is significantly lower than the proportion of other districts.

~~H~~~~o~~~~: p1 = p2~~

Ha: p1 < p2

Sample X N Sample p

1 132 200 0.660000

2 84 120 0.700000

Difference = p (1) - p (2)

Estimate for difference: -0.04

95% upper bound for difference: 0.0481494

Test for difference = 0.05 (vs < 0.05): Z = -1.68 P-Value = 0.047

The calculated P-value is less than the significance level of 0.05. Therefore we reject the null hypothesis. We can conclude that there is enough evidence to show that the proportion of city school students that will pass is less.