

Questions on lesson 2.4?

We will be having our concept mastery quiz shortly on a 95% C.I. and statistical significance.

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7. The local water company also conducted a survey of 120 people which they said showed that people prefer tap water over Whatta Water. Forty-one of the respondents said Whatta Water tastes better.

a. Use a 95% confidence interval to determine a range of values for the population proportion of people who prefer Whatta Water. Explain your work.

2

$\hat{p} \pm 2\left(\sqrt{\frac{\hat{p}(1-\hat{p})}{n}}\right)$

categorical

$\sqrt{\frac{\hat{p}(1-\hat{p})}{n}}$

\hat{p} is sample proportion
 n is sample size

continuous


$\frac{s}{\sqrt{n}}$

$\text{mean} \pm 2\left(\frac{s}{\sqrt{n}}\right)$

s is original standard deviation
 n is sample size

The assumption again is that the results will be 50% if there is no difference between the two kinds of water.

b. Use the sample proportion and standard deviation of the sampling distribution to label the horizontal axis of the normal curve.



Content Mastery Quiz - lesson 2.4

Show ALL work to receive full points

A sample of 75 taxi riders were asked how much their trip cost. The sample mean was \$23.75 and the sample standard deviation was \$1.20.

$$\sqrt{\frac{\hat{p}(1-\hat{p})}{n}} \quad \text{OR} \quad \frac{S}{\sqrt{n}}$$

1) Determine the range of values for a 95% C. I. for the data.

2) If a ride cost \$24.00, is this statistically significant or not?

Statistics Review