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Homework

Please answer the following questions. Be sure that you have downloaded the associated Excel file before beginning the homework. This lesson uses the **JulyPopProportionHW.xlsx** file.

*Remember that homework counts for 20% of your final grade. You are allowed **unlimited** attempts per question for homework problems. The main goal of homework is for you to practice and learn how to apply what you've learned in the content without worrying about getting the problem right the first time. Some homework problems may also provide hints or advice. Have fun!*

M5L5HW1

1/1 point (graded)

A cell phone chip vendor needs to prove that they are producing at most 1% defective chips. Design an appropriate null and alternative hypotheses. In a sample of 500 chips from a large population, suppose 10 were defective. For $\alpha = 0.05$, would you conclude that the new vendor's chips contain at most 1% defective chips?

What do you conclude?

☐ We fail to reject H_0 ; the p-value is 0.0311

☐ We fail to reject H_0 ; the p-value is 0.0511

☒ We reject H_0 ; the p-value is 0.0311 ✓

☐ We reject H_0 ; the p-value is 0.0511

Submit

M5L5HW2

1/1 point (graded)

A basketball player has a long history of making 70% of his free throws. Early in the season, she has made 180 of 300 free throws. Does this provide sufficient evidence (for $\alpha=0.05$) that the player's free throw shooting ability has changed?

What do you conclude?

☐ We fail to reject H_0 ; the p-value is 0.0003. The shooting ability has not changed.

☐ We fail to reject H_0 ; the p-value is 0.03. The shooting ability has not changed.

☒ We reject H_0 , the p-value is 0.0003. The shooting ability has changed. ✓

☐ We reject H_0 , the p-value is 0.03. The shooting ability has changed.

Submit

M5L5HW3

1/1 point (graded)

In the court case *Castaneda vs. Partida* before the Supreme Court, the facts were that 79% of the people in Hidalgo County, Texas, had Spanish surnames but only 339 of 870 jurors selected had Spanish surnames. The Supreme Court used statistics to conclude that the jury process was unfair and underrepresented those with Spanish surnames.

What do you conclude?

☒ Jury selection is underrepresented. ✓

☐ Jury selection is not underrepresented.

Submit

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