

- 1) About 29% of all burglaries are through an open or unlocked door or window. A sample of 130 burglaries indicated that 43 took place via an open or unlocked door or window. At the 0.05 level of significance, can it be concluded that this differs from the stated proportion? 1) _____
- A) No. There is not enough evidence to support the claim that the proportion of open or unlocked window or door burglaries differs from 29%.
- B) There is not enough information to draw a conclusion.
- C) Yes. There is enough evidence to support the claim that the proportion of open or unlocked window or door burglaries differs from 29%.
- 2) A random sample of 450 shoppers at Quincy Mall found that 125 favored longer shopping hours. Is this sufficient evidence at the 0.10 level of significance to conclude that less than 30% of the shoppers at Quincy Mall favor longer hours? 2) _____
- A) There is not enough evidence to support the claim that less than 30% of the shoppers favor longer hours.
- B) There is enough evidence to support the claim that less than 30% of the shoppers favor longer hours.
- 3) The Energy Information Administration reported that 51.9% of homes in the United States were heated by natural gas. A random sample of 200 homes found that 109 were heated by natural gas. Does the evidence support the claim or has the percentage changed? Use $\alpha = 0.02$ and the P -value method. 3) _____
- A) There is enough evidence to reject the claim that the percentage of homes that are heated by natural gas is 51.9%.
- B) No. There is not enough evidence to reject the claim that the percentage of homes that are heated by natural gas is 51.9%.
- C) There is not enough information to draw a conclusion.
- 4) Researchers suspect that 21% of all high school students smoke at least one pack of cigarettes a day. At Wilson High School, a randomly selected sample of 300 students found that 49 students smoke at least one pack of cigarettes a day. At $\alpha = 0.05$, test the claim that less than 21% of all high school students smoke at least one pack of cigarettes a day. Use the P -value method. 4) _____
- A) There is not enough information to draw a conclusion.
- B) Yes. There is enough evidence to support the claim that the percentage of students who smoke at least one pack of cigarettes a day is less than 21%.
- C) No. There is not enough evidence to support the claim that the percentage of students who smoke at least one pack of cigarettes a day is less than 21%.

5) A survey by *Men's Health* magazine stated that 13% of all men said that they used exercise to relieve stress. A random sample of 100 men was selected, and 11 said that they used exercise to relieve stress. Use the P -value method to test the claim. Use $\alpha = 0.10$.

5) _____

- A) No. There is enough evidence to reject the claim that the percentage of men who use exercise to relieve stress is 13%.
- B) Yes. There is not enough evidence to reject the claim that the percentage of men who use exercise to relieve stress is 13%.
- C) There is not enough information to draw a conclusion.

Answer Key

Testname: PRACTICE24

- 1) A
- 2) A
- 3) B
- 4) B
- 5) A