vassarstats.net/tabs.html

1.You believe being divorced influences peoples’ religious beliefs. The population mean on the survey of religious beliefs = 45.

Ho =

HA =

You select a sample of 66 people and give them your survey. Their *x̅* = 42.7, with *s* = 10.

Calculate your statistic.

Evaluate your Null Hypothesis.

What does this conclusion mean about why your sample mean is different from the population one?

Describe the mistake you could be making.

2. You have a sample that you have given athletic training to decrease their race times. The population mean race time is 23.5.

Ho =

HA =

The sample of 41 people after training has an average race time of 21.8 minutes with s = 5.5.

Calculate your statistic.

Evaluate your Null Hypothesis.

What does this conclusion mean about why your sample mean is different from the population one?

Describe the mistake you could be making.

How often will this mistake happen?

Answers

1. Ho = The sample/population difference is chance (or, being divorced has no effect)

HA = The IV influences religious beliefs

*tss* = -1.87

df = 65, *p* (two tailed) = 6.6% > 5%, so Retain H0.

The difference is probably chance (or, being divorced probably has no effect)

Type II—maybe the difference is because of being divorced

2. Ho = The sample/population difference is chance (or, the training did not affect race times)

HA = The training decreased race times

*tss* = -1.98

df = 40, *p* (one tailed) = 2.73% < 5%, so Reject H0.

The training probably decreased race times

Type I—maybe the difference was chance

2.73% of the time