1. Suppose that the shoe company Alta Claims that their mean weekly sales are $17,350. A random sample of 35 weeks yields a sample mean of $10,450. With a sample standard deviation of s =$1500.

Given that the pair of hypothesis that correspond to the claim are

H0: µ = 17,350

H1: µ ≠ 17,350

Find the critical value for the hypothesis test. Assume that the significance level is α = 0.08.

Critical values = +/-

Round your final answer to two decimal places.

1. Suppose that an insurance agent for State Ranch claims that the average life insurance policy premium that he sells is $450 per year. A sample of 40 customers yields a mean of x =$475 and a standard deviation of s = $85. You decide to test his claim at the α = 0.05 significance level.

If the hypothesis are

H0: µ = 450

H1: µ ≠ 450

With critical values of ±1.96, compute the sample statistic, and choose the appropriate conclusion.

Z =

Round your answer o two decimal places.

1. Suppose that the company CEO for Quitters, Inc. claims that the average severance package for an employee at his company is $450,000. You decide to test his claim using a significance level of α = 0.04. A sample of 40 employees yields a mean of x = $414,845 with a sample standard deviation of s = $125,575. First, you set up your hypothesis as follows

H0: µ = $450,000 (claim)

H1: µ = $450,000

Then you compute your sample statistic, get the following

Z = 414.845 – 450,000

 125,575

 √40

= -1.77

Compute the probability of getting a sample statistic at least as extreme as z = -1.77, and interpret this probability value.

Probability =

Final answer to two decimal places.

1. Suppose a private university claims that more than 2/3 of their students graduate within for years. A random survey of 300 alumni finds that 190 of them graduated within 4 years.

Given that the pair of hypothesis that corresponds to the claim are

H0: p ≤ 0.67

H1: p ˃ 0.67

Find the critical value for the hypothesis test. Assume the significance level is α = 0.01.

Remember that this is a right-tailed test, so your critical value will be positive. Remember also that in one-tailed test, you don’t have to cut your α-value in half.

Critical value =

Round your final answer to two decimal places.

1. Suppose that an insurance agent for Almost Heaven insurance claims that less than 20% of his life insurance policies ever have to ‘pay out’. You decide to test his claim at the α = 0.02 significance level. A sample of 75 policies from the last year finds that 30 of them had to pay out.

If the hypothesis are

H0: p ≥ 0.20

H1: p < 0.20

With a critical value of -2.05, compute the sample statistic, and choose the appropriate conclusion.

Z =

Round the sample statistic to two decimal places.

1. Suppose that the CEO of U-Store-it claims that more than 2/3 of his employees carry secondary health insurance. You decide to test his claim using a significance level of α = 0.05. A sample of 150 employees finds that 108 of them carry secondary health insurance.

First, you set up your hypothesis as follows:

H0: p ≤ 0.67

H1: p > 0.67(claim)

Then you compute your sample statistic, and get the following:

Z = 108 – 0.67

 150\_\_\_\_\_\_\_\_

 √0.67 x 0.33

 150

=1.30

Compute the probability of getting a sample statistic as least as extreme as z = 1.30, and interpret this probability value. Remember that in one –tailed test such as this, you do not need to multiply your p-value by two.

Probability =

Round your final answer to two decimal places.