**1.** Use the given information to find the P-value.

The test statistic in a right-tailed test is z =1.26

P-value =\_\_\_\_ (Round to four decimal places as needed)

**2.** Suppose IQ scores were obtained from randomly selected couples. For 20 such pairs of people, the linear correlation coefficient is 0.904 and the equation of the regression line is Ŷ = 3.06 + 0.99xm where x represents the IQ score of the husband. Also, the 20x values have a mean of 101.48 and the 20y values have a mean of 103.6. What is the best predicted IQ of the wife, given that the husband has an IQ of 94?

The best predicted IQ of the wife is \_\_\_\_\_\_

**3.** Find the critical z values.

Assume that the normal distribution applies

Right-tailed test, a =0.08

Z= \_\_\_\_\_\_\_

(Round to two decimal places as needed. Use a comma to separate answers as needed)

**4.**  Given: The paired sample data of the age and weight of dogs result in a linear correlation coefficient very close to 0.

Conclusion: Older dogs tend to weigh more.

Describe the error in the stated conclusion.

A. Correlation does not imply causality as the conclusion incorrectly suggests.

B. A linear correlation coefficient very close to O implies that there is a linear correlation. But it could be a negative correlation instead of a positive correlation as the conclusion incorrectly suggest.

c. With a linear correlation coefficient very to 0, we should conclude that there is not a linear correlation, so there does not appear to be a correlation between age and weight as the conclusion incorrectly suggests.

D. A linear correlation coefficient very close to 0 implies that there is a linear correlation between the averages but a correlation between the averages does not imply a correlation between individuals as the conclusion incorrectly suggests.

**5.** Determine whether the following hypothesis test involves a sampling distribution of means that is a normal distribution, student t distribution, or neither.

Claim µ = 4.52. Sample data: N =27, x= 3.06, s = 0.19. The sample data comes from a population that is normally distributed with unknown µ and ó = 3.85.

What kind of sampling distribution of means does the hypothesis test involve?

A. Student t distribution

B. Neither student t nor normal distribution

c. Normal distribution

**6.**  The data shows the chest size and weight of several bears. Find the regression equation, letting the fist variable be the independent (x) variable. The find the best predicted weight of a bear with a chest size of 55 inches.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Chest size (inches) | 53 | 43 | 60 | 51 | 48 | 94 |
| Weight (pounds) | 348 | 229 | 465 | 353 | 319 | 371 |

What is the regression equation?

Ŷ = \_\_\_\_\_\_ +\_\_\_\_\_\_\_\_x (Round to two decimal places as needed)

What is the best predicted value?

Ŷ = \_\_\_\_\_ Pounds (Round to one decimal place as needed)

**7.** State the final conclusion in simple non-technical terms.

Original claim: The proportion of male golfers is less than 0.6. Initial conclusion: Fail to reject the null hypothesis.

Which of the following is the correct conclusion.

A. There is sufficient evidence to support the claim the proportion of male golfers is less than 0.6.

B. There is not sufficient evidence to support the claim that the proportion of male golfers is less than 0.6.