

Name _____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Given the linear correlation coefficient r and the sample size n , determine the critical values of r and use your finding to state whether or not the given r represents a significant linear correlation. Use a significance level of 0.05.

- 1) $r = 0.981$, $n = 25$ 1) _____
 A) Critical values: $r = \pm 0.396$, significant linear correlation
 B) Critical values: $r = \pm 0.487$, no significant linear correlation
 C) Critical values: $r = \pm 0.487$, significant linear correlation
 D) Critical values: $r = \pm 0.396$, no significant linear correlation
- 2) $r = 0.168$, $n = 15$ 2) _____
 A) Critical values: $r = \pm 0.514$, no significant linear correlation
 B) Critical values: $r = 0.514$, no significant linear correlation
 C) Critical values: $r = \pm 0.532$, no significant linear correlation
 D) Critical values: $r = \pm 0.514$, significant linear correlation

Find the value of the linear correlation coefficient r .

- 3)

x	21.5	10.8	34.9	48.6	45.3
y	5	2	7	5	7

 3) _____
 A) -0.732 B) 0 C) 0.732 D) 0.651

Find the best predicted value of y corresponding to the given value of x .

- 4) Six pairs of data yield $r = 0.444$ and the regression equation $\hat{y} = 5x + 2$. Also, $\bar{y} = 18.3$. What is the best predicted value of y for $x = 5$? 4) _____
 A) 4.22 B) 27 C) 18.3 D) 93.5
- 5) Four pairs of data yield $r = 0.942$ and the regression equation $\hat{y} = 3x$. Also, $\bar{y} = 12.75$. What is the best predicted value of y for $x = 2.8$? 5) _____
 A) 0.942 B) 8.4 C) 12.75 D) 2.826

Use the given data to find the equation of the regression line. Round the final values to three significant digits, if necessary.

- 6)

x	6	8	20	28	36
y	2	4	13	20	30

 6) _____
 A) $\hat{y} = -2.79 + 0.897x$ B) $\hat{y} = -2.79 + 0.950x$
 C) $\hat{y} = -3.79 + 0.801x$ D) $\hat{y} = -3.79 + 0.897x$

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Answer Key

Testname: QUIZ 11

- 1) A
- 2) A
- 3) C
- 4) C
- 5) C
- 6) D