TOPIC TEST 8

Question 1: What would the scatterplot show for data that produce a correlation of +0.88?​

1. ​points clustered close to a line that slopes down to the right
2. ​**points clustered close to a line that slopes up to the right**
3. ​points widely scattered around a line that slopes down to the right
4. ​**points widely scattered around a line that slopes up to the right**

Question 2: The scatter plot for a set of X and Y values shows the data points clustered in a nearly perfect circle.  For these data, what is the most likely value for the correlation?​

1. ​a value near +1.00 or 1.00
2. ​**either positive or negative near 0**
3. a positive correlation near 0​
4. ​a negative correlation near 0

Question 3: ​For which of the following correlations would the data points be clustered most closely around a straight line?

1. ​r = –0.10
2. ​r = +0.40
3. ​**r = –0.70**
4. ​r = –0.00

Question 4: A scatter plot shows data points that are widely scattered around a line that slopes down to the right.  Which value would be closest to the correlation for these data?​

1. ​0.80
2. ​–0.80
3. **–0.40**
4. ​0.40

Question 5: The results from a research study indicate that adolescents who spend more time online gaming also tend to have better verbal skills. The correlation between amount of time online gaming and quality of verbal skills is an example of a \_\_\_\_.​

1. ​correlation near one
2. ​correlation near zero
3. ​**positive correlation**
4. ​negative correlation

Question 6: For a two-tailed hypothesis test evaluating a Pearson correlation, what is stated by the null hypothesis?​

1. ​There is a non-zero correlation for the general population.
2. ​**The population correlation is zero.**
3. ​There is a non-zero correlation for the sample.
4. ​The sample correlation is zero.

Question 7: What is the value of SP for the following set of data?

X         Y

4          3

1          2

1          5

2          6​

1. ​1
2. -1​
3. ​–5
4. ​5

Question 8: A set of n = 15 pairs of scores (X and Y values) has SSX = 4, SSY = 25, and SP = 6. The Pearson correlation for these data is \_\_\_\_.​

1. ​**6/10**
2. ​6/(100/15)
3. 6/100​
4. ​6/(10/)

Question 9: A set of n = 15 pairs of scores (X and Y values) produces a correlation of r = 0.40. If each of the X values is multiplied by 2 and the correlation is computed for the new scores, what value will be obtained for the new correlation?​

1. ​r = 0.20
2. ​This cannot be determined without knowing all the X and Y scores.
3. ​**r = 0.40**
4. ​r = 0.80

Question 10: Gordon works at a souvenir stand in Hollywood. He suspects that older people tend to spend more on celebrity souvenirs. He asks a random sample of customers how old they are and records the amount (in dollars) they spend at his store.

What is the **dependent** variable in this study?

1. Spending more on celebrity souvenirs
2. Older people
3. Celebrity souvenirs
4. Age
5. **Amount spent on souvenirs ($)**

Question 11:

A graph with red stars

AI-generated content may be incorrect.  
The scatterplot indicates that

1. Older people tend to spend less on souvenirs
2. Younger people tend to spend more on souvenirs
3. **Older people tend to spend more on souvenirs**
4. Older people tend to spend the same amount on souvenirs as younger people

Question 12: A screenshot of a question

AI-generated content may be incorrect.  
The relationship between age and amount spent on celebrity souvenirs in this sample:

1. **Is consistent with the prediction**
2. Contradicts the prediction

Question 13: How many people were in the sample used to calculate Pearson's r?

* 60

Question 14: What is Pearson's r in this sample? Give your answer to 2 decimal places.

* 0.69

Question 15: What is the p-value:

1. **p<.001**
2. p=<.001
3. p=.000
4. p=.001

Question 16: Is Pearson's r significant?

1. No
2. **Yes**

Question 17: What is r2 in this sample? Give your answer to two decimal places.

* 0.48

Question 18: Which is the best interpretation of r2

[Calculated with Pearson's *r* to 2 decimal places]

1. 48% of the linear relationship between age and the amount spent on souvenirs can be explained by Pearson's r.
2. 48% of the variation in age can be explained by the linear relationship between age and amount spent on souvenirs.
3. **48% of the variation in the amount spent on souvenirs can be explained by the linear relationship between age and amount spent on souvenirs.**