GEOMETRY · NEBRASKA

Geometry

Practice Test

Unit 4: Data Analysis and Probability

25 Questions

Original practice test based on the Nebraska curriculum. Work through each question, then check your answers at the end.

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

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Question 1

The data are $4,\ 6,\ 8,\ 10,$ and $12.$ The mean is

A) 10

B) 8

C) 6

D) 40

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Question 2

The data are $3,\ 5,\ 7,\ 8,\ 9,$ and $12.$ The median is

A) 7

B) 8

C) 7.5

D) 9

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Question 3

The data are $2,\ 3,\ 3,\ 5,\ 7,$ and $3.$ The mode is

A) 2

B) 5

C) 7

D) 3

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Question 4

The data range from 4 to 18. The range is

A) 14

B) 18

C) 4

D) 22

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Question 5

The data are 2, 4, 6, 8, 10, 12, and 14. The first quartile is 4 and the third quartile is 12. The interquartile range is

A) 10

B) 8

C) 6

D) 4

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Question 6

The data are 2, 4, 4, 4, 5, 5, 7, and 9. The population standard deviation is

A) 4

B) 1.4

C) 2

D) 5

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Question 7

The data are 4, 6, and 8. The mean absolute deviation, to one decimal place, is about

A) 2

B) 1.3

C) 0

D) 4

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Question 8

A fair six sided die is rolled once. The probability of rolling a prime number is

A) $\frac{1}{3}$

B) $\frac{2}{3}$

C) $\frac{1}{2}$

D) $\frac{1}{6}$

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Question 9

Two fair coins are tossed. The probability of two heads is

A) $\frac{1}{2}$

B) $\frac{3}{4}$

C) $\frac{1}{3}$

D) $\frac{1}{4}$

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Question 10

A card is drawn from a standard deck. The probability of drawing an ace is

A) $\frac{1}{13}$

B) $\frac{1}{4}$

C) $\frac{1}{52}$

D) $\frac{4}{13}$

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Question 11

The probability of rain tomorrow is 0.3. The probability of no rain is

A) 0.3

B) 0.7

C) 1.3

D) 0.03

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Question 12

A bag has 3 red balls and 2 blue balls. Two balls are drawn without replacement. The probability both are red is

A) 0.6

B) 0.36

C) 0.3

D) 0.5

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Question 13

A die is rolled and a coin is tossed. The probability of an even number and heads is

A) $\frac{1}{4}$

B) $\frac{1}{2}$

C) $\frac{3}{4}$

D) $\frac{1}{3}$

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Question 14

In a survey of 50 students, 18 like both sports and music, 12 like sports only, 10 like music only, and 10 like neither. The probability a randomly chosen student likes sports is

A) 0.36

B) 0.6

C) 0.24

D) 0.2

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Question 15

Using the same survey, the probability a student likes music, given that the student likes sports, is

A) 0.36

B) 0.3

C) 0.72

D) 0.6

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Question 16

A line of best fit is $y = 2x + 3$. The predicted value of y when $x = 10$ is

A) 20

B) 23

C) 13

D) 33

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Question 17

For a data point, the actual value is 25 and the predicted value is 23. The residual is

A) 2

B) -2

C) 48

D) 0

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Question 18

A correlation coefficient of $r = 0.92$ indicates a

A) weak negative correlation

B) strong positive correlation

C) no correlation

D) weak positive correlation

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Question 19

In a scatter plot, as x increases, y tends to decrease. The correlation is

A) positive

B) none

C) negative

D) perfectly positive

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Question 20

Test scores are normally distributed with mean 100 and standard deviation 15. About what percent of scores are between 85 and 115?

A) 95%

B) 68%

C) 99.7%

D) 50%

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Question 21

A box plot has first quartile 12 and third quartile 28. The interquartile range is

A) 16

B) 8

C) 35

D) 20

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Question 22

Adding a very large outlier to a data set usually

A) increases the median more than the mean

B) leaves both the mean and median unchanged

C) increases the mean more than the median

D) changes the mode the most

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Question 23

Which sample is least likely to be biased for a school survey?

A) students in one class

B) volunteers only

C) the survey writers friends

D) a random sample from all students

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Question 24

The data are 6, 9, 12, 15, and 18. The mean is ____

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Question 25

A bag has 4 red balls and 6 blue balls. The probability of drawing a blue ball is ____

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ANSWER KEY

1.	B	**10.**	A	**18.**	B
2.	C	**11.**	B	**19.**	C
3.	D	**12.**	C	**20.**	B
4.	A	**13.**	A	**21.**	A
5.	B	**14.**	B	**22.**	C
6.	C	**15.**	D	**23.**	D
7.	B	**16.**	B	**24.**	12
8.	C	**17.**	A	**25.**	0.6
9.	D				

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