ALASKA GEOMETRY · UNIT 4 · 25 QUESTIONS

Data Analysis and Probability — Practice Test

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.

1 **The data are 5, 7, 9, 11, and 13. The mean is**

- A 11
- B 7
- C 45
- D 9

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2 **The data are 4, 8, 9, 12, 15, and 20. The median is**

- A 9
- B 10.5
- C 12
- D 13.5

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3 **The data are 4, 6, 6, 8, 9, 6, and 3. The mode is**

- A 4
- B 8
- C 9
- D 6

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4 **The data range from 7 to 31. The range is**

- A 24
- B 31
- C 7
- D 38

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5 **A data set has first quartile 10 and third quartile 26. The interquartile range is**

- A 10
- B 16
- C 36
- D 6

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6 **The data are 2, 4, and 6. The population standard deviation, to one decimal place, is about**

- A 2
- B 1.6
- C 2.7
- D 4

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7 **The data are 2, 5, and 8. The mean absolute deviation is**

- A 3
- B 2
- C 0
- D 6

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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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9 **Three fair coins are tossed. The probability of three heads is**



A $\frac{1}{2}$

B $\frac{3}{8}$

C $\frac{1}{8}$

D $\frac{1}{4}$

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10 A card is drawn from a standard deck. The probability of drawing a king is

- **A** $\frac{1}{4}$
- **B** $\frac{1}{52}$
- **C** $\frac{4}{13}$
- **D** $\frac{1}{13}$

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11 The probability of rain tomorrow is 0.45. The probability of no rain is

- **A** 0.45
- **B** 0.55
- **C** 1.45
- **D** 0.045

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12 **A bag has 5 red balls and 5 blue balls. Two balls are drawn without replacement. The probability both are red is**



A $\frac{1}{4}$

B $\frac{2}{9}$

C $\frac{1}{2}$

D $\frac{4}{9}$

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13 **A die is rolled and a coin is tossed. The probability of an odd number and tails is**

A $\frac{1}{4}$

B $\frac{1}{2}$

C $\frac{3}{4}$

D $\frac{1}{3}$

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14 **In a survey of 80 students, 24 like both sports and music, 16 like sports only, 20 like music only, and 20 like neither. The probability a randomly chosen student likes sports is**



A 0.3

B 0.25

C 0.5

D 0.2

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

- A 0.3
- B 0.4
- C 0.6
- D 0.5

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16 **A line of best fit is y = 3x - 2. The predicted value of y when x = 6 is**

- A 20
- B 4
- C 10
- D 16

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17 **For a data point, the actual value is 42 and the predicted value is 38. The residual is**

A 4

B -4

C 80

D 0

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18 **A correlation coefficient of r = -0.88 indicates a**

A weak positive correlation

B strong negative correlation

C no correlation

D weak negative correlation

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19 **In a scatter plot, as x increases, y tends to increase. The correlation is**

A positive

B none

C negative

D perfectly negative

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20 **Test scores are normally distributed with mean 80 and standard deviation 10. About what percent of scores are between 60 and 100?**

A 68%

B 95%

C 99.7%

D 50%

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21 **A box plot has first quartile 15 and third quartile 41. The interquartile range is**

- A 26
- B 56
- C 15
- D 41

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22 **Adding a very small outlier to a data set usually**

- A increases the median more than the mean
- B leaves both the mean and median unchanged
- C decreases the mean more than the median
- D changes the mode the most

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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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24 **The data are 8, 11, 14, 17, and 20. The mean is ____**

ANSWER _____

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25 **A bag has 3 red balls and 7 blue balls. The probability of drawing a blue ball is ____**

ANSWER _____

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ANSWER KEY

1.	D	**10.**	D	**19.**	A
2.	B	**11.**	B	**20.**	B
3.	D	**12.**	B	**21.**	A
4.	A	**13.**	A	**22.**	C
5.	B	**14.**	C	**23.**	D
6.	B	**15.**	C	**24.**	14
7.	B	**16.**	D	**25.**	0.7
8.	C	**17.**	A		
9.	C	**18.**	B		

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