ALBERTA MATH 20-3 · UNIT 5 · 25 QUESTIONS

Statistics and Graphs — 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 line graph shows sandwiches sold at a cafeteria, Monday to Thursday in order. How many more sandwiches were sold on Thursday than on Monday?**

- **A** 20
- **B** 15
- **C** 25
- **D** 100

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2 **On a circle graph, one category makes up 25% of the whole. What is the central angle of its sector?**

A 25°

B 90°

C 125°

D 180°

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3 **A histogram shows ages with these frequencies: 0-9: 3, 10-19: 7, 20-29: 5, 30-39: 2. How many people are in the 10-29 age range?**

A 7

B 5

C 12

D 17

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4 **On a pictograph, each symbol represents 5 books. One row has 6 symbols. What value does the row represent?**

- A 6
- B 11
- C 25
- D 30

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5 **Which graph is most appropriate for showing how the temperature changed, hour by hour, during one day?**

- A A line graph
- B A circle graph
- C A pictograph
- D A histogram

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6 **A bar graph comparing two stores starts its vertical axis at 90 instead of 0. The bars reach 95 and 100. Why is this graph misleading?**

- A The bars are the wrong colour
- B The axis does not start at zero, so the difference looks much larger than it is
- C The graph has too many bars
- D The values should be shown as percents

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7 **The line graph shows afternoon temperatures over five days, Monday to Friday in order. What was the temperature on Wednesday?**

- A 12°C
- B 14°C
- C 9°C
- D 13°C

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8 **Club memberships are: Art 18, Drama 24, Sports 30, Music 12. What is the total number of memberships?**

A 72

B 78

C 90

D 84

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9 **One sector of a circle graph has a central angle of 72°. What percent of the whole does this sector represent?**

A 20%

B 72%

C 25%

D 18%

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10 **On a pictograph, each full symbol represents 10 cars. A row has 3 full symbols and 1 half symbol. What value does the row represent?**

- A 30
- B 35
- C 40
- D 45

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11 **A histogram of test scores has these frequencies: 50-59: 4, 60-69: 9, 70-79: 11, 80-89: 6. How many students scored from 60 to 79?**

- A 9
- B 11
- C 20
- D 30

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12 **A histogram uses the intervals 0-10, 10-20, and 20-40 on its horizontal axis. Why is this histogram misleading?**

- A The intervals are listed in the wrong order
- B The frequencies are too small
- C A histogram should never use numbers
- D The intervals do not all have the same width

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13 **The line graph shows transit riders in Week 1 and Week 2. What was the increase in riders?**

- A 60
- B 40
- C 260
- D 460

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14 **A circle graph of 200 students shows that 30% walk to school. How many students walk to school?**

- A 30
- B 60
- C 70
- D 170

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15 **The line graph shows rainfall, in millimetres, for April, May and June in order. What is the mean monthly rainfall?**

- A 30 mm
- B 50 mm
- C 40 mm
- D 120 mm

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16 **On a pictograph, each symbol represents 8 tickets. Row A has 4 symbols and Row B has 7 symbols. How many more tickets does Row B represent than Row A?**

- A 3
- B 11
- C 32
- D 24

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17 **Which graph is most appropriate for showing what fraction of a monthly budget is spent on rent, food, transit, and other costs?**

- A A circle graph
- B A line graph
- C A histogram
- D A pictograph with no key

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18 **A histogram of heights, in centimetres, has these frequencies: 140-149: 8, 150-159: 12, 160-169: 5. How many people have heights from 150 to 159 cm?**

- A 8
- B 12
- C 5
- D 25

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19 **In a pictograph comparing two years, the symbol for the second year is drawn twice as tall and twice as wide as the symbol for the first year, even though the second value is only twice as large. Why is this misleading?**

- A Pictographs are never allowed in newspapers
- B The key is written below the graph
- C The larger symbol covers about four × the area, so the increase looks bigger than it is
- D The two symbols use different colours

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20 **A category makes up 40% of a circle graph. What is the central angle of its sector?**

- A 40°
- B 90°
- C 120°
- D 144°

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21 **In Grade 9 there are 20 boys and 25 girls, and in Grade 10 there are 18 boys and 22 girls. What is the total number of girls in the two grades?**

- A 47
- B 38
- C 45
- D 85

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22 **The line graph shows temperature against time of day. By how much did the temperature drop from noon to 4 p.m.?**

A 18°C

B 7°C

C 11°C

D 29°C

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23 **Which graph is most appropriate for showing how many students scored in each grouped interval, such as 60-69 and 70-79?**

A A circle graph

B A line graph

C A histogram

D A pictograph

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24 **A graph in an advertisement shows two bars but has no title, no labels on either axis, and no scale. What is the main problem?**

- A The bars are drawn too neatly
- B There are only two categories
- C The graph uses a vertical axis
- D Readers cannot tell what the bars represent or how large the values are

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25 **Three categories are 35%, 25%, and 20%. What percent is left for the remaining category?**

- A 20%
- B 15%
- C 25%
- D 80%

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ANSWER KEY

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

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