BRITISH COLUMBIA FOUNDATIONS OF MATHEMATICS AND PRE-CALCULUS 10 (MFMP-10) · UNIT C · 25 QUESTIONS

Linear Relations and Functions — 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 domain of the relation {(-3, 4), (0, -1), (2, 4), (5, 7)} is**

- A {-1, 4, 7}
- B {-3, 0, 2, 5}
- C {-3, -1, 0, 2}
- D {4, -1, 7}

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2 The range of the relation {(1, -2), (3, 0), (3, 5), (6, -2)} is

- A {1, 3, 6}
- B {-2, 0, 5}
- C {-2, 0, 3, 5}
- D {0, 5, 6}

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3 Which of the following relations is NOT a function?

- A $y = 2x + 1$
- B $y = x^2 - 3$
- C {(0, 1), (1, 1), (2, 1)}
- D {(-1, 2), (-1, 5), (2, 5)}

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4 **If f(x) = 3x - 4, then the value of f(5) is ____.**



ANSWER _____

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5 **If f(x) = x^2 - 3x + 1, then the value of f(-2) is ____.**

ANSWER _____

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6 **The slope of the line through (2, 3) and (6, 11) is**



A 2

B $\frac{1}{2}$

C 4

D -2

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7 The slope of the line $y = -3x + 8$ is

- **A** 8
- **B** -3
- **C** 3
- **D** $-\frac{1}{3}$

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8 The y-intercept of the line $y = 4x - 7$ is

- **A** 4
- **B** -4
- **C** -7
- **D** 7

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9 The graph shows the line y = 2x + 1. The value of y when x = 2 is

- A 3
- B 4
- C 5
- D 6

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10 The equation of the line with slope 3 and y-intercept -2 is

- A y = 3x + 2
- B y = -2x + 3
- C y = 3x - 2
- D y = -3x - 2

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11 **The equation of the line through (1, 5) with slope -2, in slope-point form, is**



A y - 5 = -2(x - 1)

B y + 5 = -2(x + 1)

C y - 1 = -2(x - 5)

D y - 5 = 2(x - 1)

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12 **When written in general form, y = 2x - 6 becomes**

- **A** 2x - y - 6 = 0
- **B** 2x + y - 6 = 0
- **C** x - 2y - 6 = 0
- **D** 2x - y + 6 = 0

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13 **The slope of the line 3x + 2y = 12 is**

- **A** $\frac{3}{2}$
- **B** $-\frac{3}{2}$
- **C** $\frac{2}{3}$
- **D** $-\frac{2}{3}$

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14 **A line parallel to y = 4x - 1 has slope**



A -4

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

C 4

D $\frac{1}{4}$

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15 **A line perpendicular to $y = 2x + 5$ has slope**

- **A** 2
- **B** $-\frac{1}{2}$
- **C** $\frac{1}{2}$
- **D** -2

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16 **The x-intercept of the line $y = 3x - 9$ is**

- **A** 3
- **B** -9
- **C** -3
- **D** 9

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17 **The points (0, 0), (2, 3), and (4, 6) lie on a line through the origin. The slope of the line is**

A $\frac{3}{2}$

B $\frac{2}{3}$

C 3

D 2

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18 **If g(x) = 5 - 2x and g(x) = 19, then the value of x is ____.**

ANSWER _____

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19 **A line has slope $\frac{2}{5}$. A line perpendicular to it has slope**



A $\frac{5}{2}$

B $-\frac{5}{2}$

C $\frac{2}{5}$

D $-\frac{2}{5}$

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20 **The equation of the line through (0, 4) and (3, 10) is**

- **A** y = 2x + 4
- **B** y = 3x + 4
- **C** y = 2x - 4
- **D** y = 6x + 4

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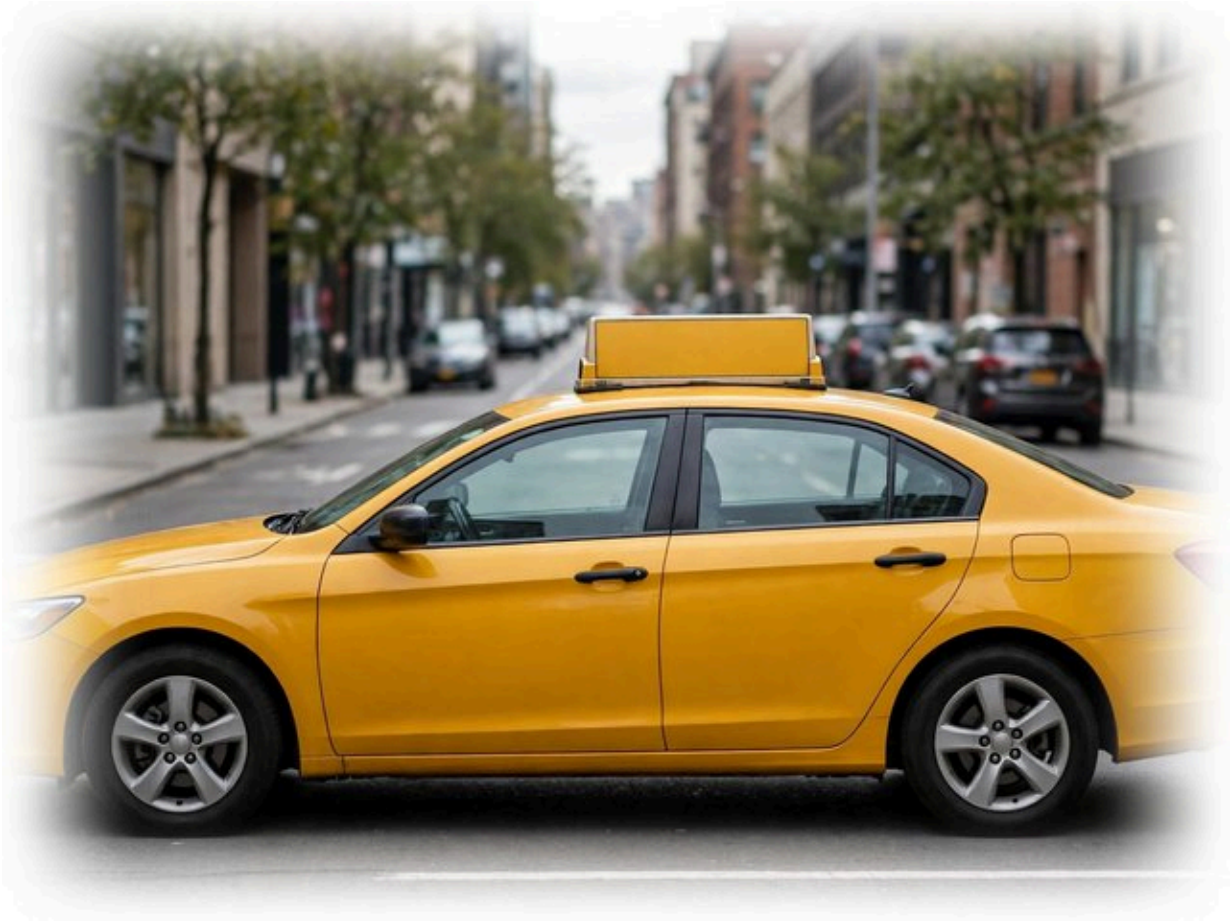
21 **A taxi charges a 4 dollar flag drop plus 2 dollars per kilometre. The cost, C, for a trip of d kilometres is**



A C = 2d + 4

B C = 4d + 2

C C = 2d - 4

D C = 6d

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22 **The cost of a 9 kilometre taxi trip at 2 dollars per kilometre plus a 4 dollar flag drop, in dollars, is ____.**

ANSWER _____

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23 **The relation {(2, 3), (4, 7), (6, 11)} is a function because**

A Each output has exactly one input

B Each input has exactly one output

C No output value is repeated

D Every input and output is different

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24 **A graph of a function is a line segment with endpoints (-2, 3) and (4, -1). The domain of the function is**

A $-2 \leq x \leq 4$

B $-1 \leq y \leq 3$

C $-2 < x < 4$

D $-1 < y < 3$

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25 **The lines $y = 3x + 1$ and $y = 3x - 4$ are**

A Perpendicular

B Parallel

C The same line

D Neither parallel nor perpendicular

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ANSWER KEY

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

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