NORTHWEST TERRITORIES 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 1

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 $-\frac{1}{}$

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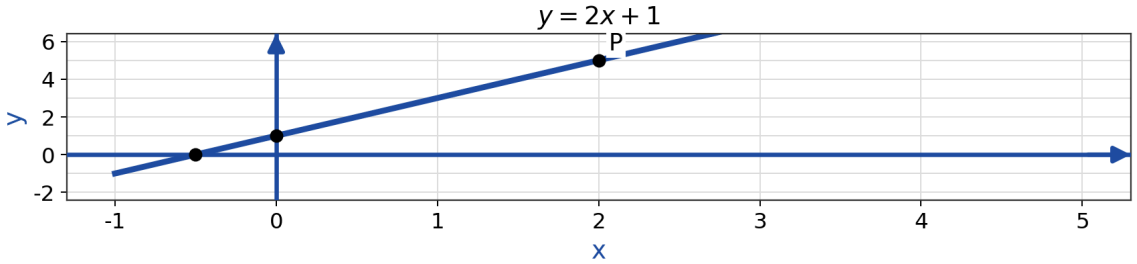
**9** **The graph shows the line y = 2x + 1. The value of y when x = 2 is**




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

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

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

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

- **A** 2
- **B** $-\frac{1}{}$
- **C** $\frac{1}{}$
- **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 3

B 2

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** $\frac{5}{}$
- **B** $-\frac{5}{}$
- **C** $\frac{2}{}$
- **D** $-\frac{2}{}$

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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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