ALBERTA MATH 10C · UNIT 5 · 25 QUESTIONS

Linear 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 **A line rises 6 units for every 2 units it runs to the right. The slope of the line is**

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

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2 **The line shown passes through two marked points. The slope of the line is**

- **A** $\frac{1}{2}$
- **B** 3
- **C** 2
- **D** 6

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3 **For the line with equation y = -4x + 7, the slope and the y-intercept are**

- **A** Slope: 4 y-intercept: 7
- **B** Slope: -4 y-intercept: 7
- **C** Slope: -4 y-intercept: -7
- **D** Slope: 7 y-intercept: -4

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4 The slope of the line passing through the points (-2, 5) and (3, 5) is

- A undefined
- B 1
- C 0
- D 5

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5 An equation of the line shown could be

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

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6 **An equation of the line with slope 3 that passes through the point (2, -1) is**

- **A** y = 3x - 7
- **B** y = 3x + 5
- **C** y = 3x - 1
- **D** y = -3x + 5

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7 **The y-intercept of the line with equation 3x + 4y = 24 is ____**

ANSWER _____

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8 **The equation 2x - y + 6 = 0 written in slope-intercept form is**

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

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9 **A line that is parallel to the line with equation 3x + 2y = 6 is**

- **A** $y = \frac{2}{3}x - 1$
- **B** $y = -\frac{3}{2}x + 4$
- **C** $y = \frac{3}{2}x + 1$
- **D** $y = -\frac{2}{3}x + 5$

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10 A line has a slope of $-\frac{2}{3}$. The slope of a line perpendicular to it is

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

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11 The slope of the line passing through the points (2, 5) and (6, -3) is _____

ANSWER _____

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12 **The x-intercept of the line shown is**

- A -3
- B 3
- C -12
- D 12

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13 **A gym charges a one-time sign-up fee of 30 dollars and 12 dollars per month. The total cost, C dollars, after m months is given by**

- A C = 30m + 12
- B C = 12m + 30
- C C = 42m
- D C = 30m - 12

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14 **A line with a slope of $\frac{2}{3}$ passes through the point (4, 1). When x = 10, the value of y is _____**

ANSWER _____

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15 **A point that lies on the line with equation y = -2x + 5 is**

A (0, -5)

B (2, -1)

C (3, 1)

D (1, 3)

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16 **An equation of the line shown is**

A y = 3x + 5

B y = 5x + 3

C y = 3x - 5

D y = x + 5

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17 **A line parallel to y = 3x - 1 passes through the point (0, 4). When x = 4, the value of y on this line is ____**

ANSWER _____

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18 An equation of the line perpendicular to $y = \frac{1}{2}x + 3$ that passes through the point (0, -2) is

- **A** $y = -2x - 2$
- **B** $y = \frac{1}{2}x - 2$
- **C** $y = 2x - 2$
- **D** $y = -2x + 3$

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19 The slope of the line shown is

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

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20 A taxi ride costs an initial charge of 4.50 dollars plus 1.80 dollars per kilometre travelled. The total cost, in dollars, of a 12 km ride is _____

ANSWER _____

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21 A plumber charges for a job according to the relation $C = 45t + 60$, where C is the total charge, in dollars, and t is the time, in hours. In this relation, the number 45 represents

A the total charge

B the flat-rate fee

C the charge per hour

D the number of hours

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22 The slope of the line passing through the points (3, 7) and (9, k) is $\frac{5}{6}$. The value of k is _____

ANSWER _____

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23 The equation $y = -\frac{3}{4}x + 2$ written in general form, $Ax + By + C = 0$, is

- **A** $3x - 4y - 8 = 0$
- **B** $3x + 4y + 8 = 0$
- **C** $3x + 4y - 8 = 0$
- **D** $4x + 3y - 8 = 0$

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24 An equation of the line passing through the points (-1, 2) and (3, 10) is

- **A** $y = 2x$
- **B** $y = -2x + 4$
- **C** $y = \frac{1}{2}x + 4$
- **D** $y = 2x + 4$

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25 **A tank contains 1200 L of water and drains at a rate of 15 L per minute. The volume, in litres, of water remaining in the tank after 35 minutes is _____**

ANSWER

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ANSWER KEY

1.	A	**10.**	D	**19.**	D
2.	C	**11.**	-2	**20.**	26.10
3.	B	**12.**	B	**21.**	C
4.	C	**13.**	B	**22.**	12
5.	D	**14.**	5	**23.**	C
6.	A	**15.**	D	**24.**	D
7.	6	**16.**	A	**25.**	675
8.	A	**17.**	16		
9.	B	**18.**	A		

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