

Algebra 1 - Writing Linear Equations and Functions - Quiz

Common Core F-LE.A.2, F-BF.A.1a, A-CED.A.2 · maths-pdf.fr/en/

Name: _____ Class: _____ Date: ____/____/____

This quick quiz has 10 questions about writing linear equations and functions, matching Common Core F-LE.A.2, F-BF.A.1a, and A-CED.A.2. Choose the best answer, then use the explanation to learn from every miss. The wrong choices come from common mistakes, so read them with care before you decide.

Algebra 1 · Common Core State Standards: **F-LE.A.2, F-BF.A.1a, A-CED.A.2**

Questions

Question 1

Which equation has slope 2 and y-intercept -5 ?

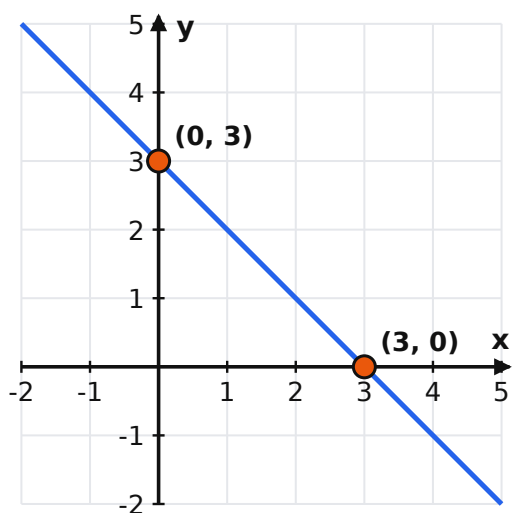
- A. $y = -5x + 2$
- B. $y = 2x + 5$
- C. $y = 2x - 5$
- D. $y = -2x - 5$

Question 2

A line has slope 4 and passes through $(1, 3)$. Which equation is correct?

- A. $y - 1 = 4(x - 3)$
- B. $y - 3 = 4(x - 1)$
- C. $y + 3 = 4(x + 1)$
- D. $y - 4 = 3(x - 1)$

Question 3



Which equation matches the line?

- A. $y = x + 3$
- B. $y = -x - 3$
- C. $y = 3x - 1$
- D. $y = -x + 3$

Question 4

x	0	1	2	3
y	2	5	8	11

Which equation fits the table?

- A. $y = 3x + 2$
- B. $y = 2x + 3$
- C. $y = 3x + 5$
- D. $y = x + 2$

Question 5

Which line is parallel to $y = 3x - 2$ and passes through (0,4)?

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

Question 6

What is the slope of a line perpendicular to $y = -2x + 1$?

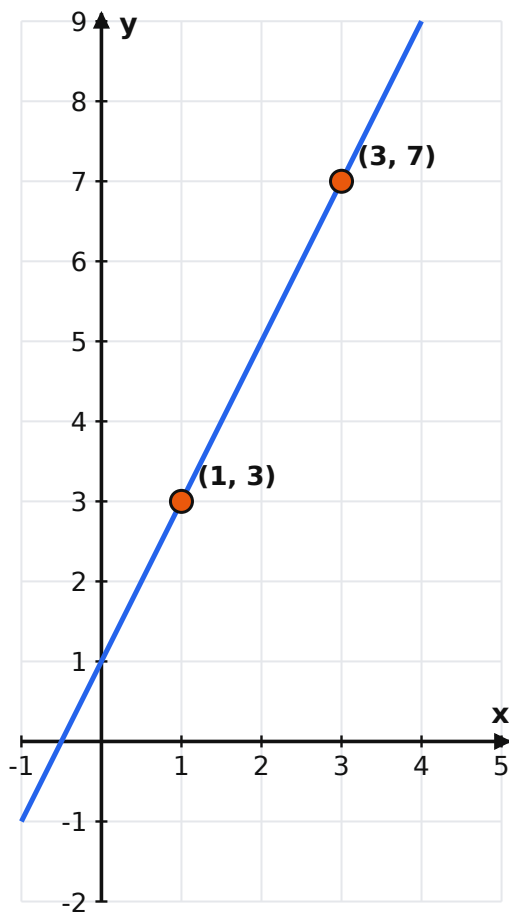
- A. 2
- B. $-\frac{1}{2}$
- C. -2
- D. $\frac{1}{2}$

Question 7

Which is the standard form of $y = 2x - 3$?

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

Question 8



What is the equation of the line through the two plotted points?

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

Question 9

A gym charges a \$15 fee plus \$4 per hour. Which function gives the cost for h hours?

- A. $C = 4h + 15$
- B. $C = 15h + 4$
- C. $C = 19h$
- D. $C = 4h - 15$

Question 10

What is the equation of the line through $(1,5)$ and $(3,11)$?

- A. $y = 3x + 5$
- B. $y = 3x + 2$
- C. $y = 2x + 3$
- D. $y = 6x - 1$

Answers

1. **C** - In $y = mx + b$, m is the slope and b is the y-intercept.
2. **B** - Point-slope form is $y - y_1 = m(x - x_1)$.
3. **D** - The y-intercept is 3 and the line falls 1 for each 1 to the right, so the slope is -1.
4. **A** - The y-value at $x = 0$ is 2, and y grows by 3 each step.
5. **C** - Parallel lines have equal slopes. The y-intercept is the y-coordinate of the point (0, 4).
6. **D** - Perpendicular slopes are negative reciprocals: the reciprocal of -2 is $-1/2$, and its opposite is $1/2$.
7. **B** - Subtract y from both sides and add 3: $2x - y = 3$. Check with (0, -3): $0 + 3 = 3$.
8. **A** - Slope = $(7 - 3)/(3 - 1) = 2$. Then $3 = 2(1) + b$ gives $b = 1$.
9. **A** - The rate \$4 per hour is the slope and the fee \$15 is the y-intercept.
10. **B** - Slope = $6/2 = 3$, then $5 = 3(1) + b$ gives $b = 2$.

Remember

- Slope from two points: $m = (y_2 - y_1)/(x_2 - x_1)$.
- Find b by substituting a point into $y = mx + b$.
- Point-slope form: $y - y_1 = m(x - x_1)$.
- Parallel lines have equal slopes; perpendicular slopes are negative reciprocals.
- In a model, the rate is the slope and the starting amount is the y-intercept.