

A.2B Write Linear Equations in Various Forms

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1 Given that a line passes through (0,6) and has a slope of $\frac{1}{2}$, write its equation.

A $f(x) = \frac{1}{2}x + 6$

B $y = \frac{1}{2}x + 6$

C $x = \frac{1}{2}y + 6$

D $y = \frac{1}{2}x + 0$

2 What is the equation of a line that has a slope of 2 and passes through point (-6, 3)?

A $y = 2x + 15$

B $y = 2x + 9$

C $y = -3x + 9$

D $y = -6x + 3$

3 What is the equation in slope-intercept form of the line that passes through the points $(-4, 2)$ and $(12, 6)$?

A $y = 0.25x + 3$

B $y = 0.25x - 4.5$

C $y = 4x + 18$

D $y = 4x - 42$

4 What is the equation of the line that contains the points $(3, 5)$ and $(7, 9)$?

A $y = 2x - 1$

B $y = x + 2$

C $y = x - 2$

D $y = 2x - 5$

5 What is the equation in slope-intercept form of the line that passes through the points $(-4, 47)$ and $(2, -16)$?

A $y = -\frac{21}{2}x + \frac{979}{21}$

B $y = -\frac{2}{21}x + \frac{979}{21}$

C $y = -\frac{21}{2}x + 5$

D $y = -\frac{2}{21}x + 5$

6 Find the equation of the line that has a slope of $-\frac{3}{4}$ and a y-intercept of 1.

A $3x + 4y = 4$

B $4x + 3y = 4$

C $\frac{3}{4}x - y = 1$

D $\frac{4}{3}x + y = 4$

- 7 Which equation in standard form has a graph that passes through the point $(-4, 2)$ and has a slope of $\frac{9}{2}$?
- A $9x - 2y = 36$
 - B $9x - 2y = 26$
 - C $9x - 2y = -40$
 - D $9x - 2y = -10$
- 8 What is the equation in standard form of the line that passes through the point $(4, -8)$ and has a slope of $\frac{1}{4}$?
- A $x - 4y = 36$
 - B $x - 4y = 28$
 - C $x - 4y = -36$
 - D $x - 4y = -28$
- 9 Which linear equation in two variables has a graph that passes through the points $(3, -5)$ and $(-7, 13)$?
- A $y = \frac{9}{2}x - \frac{37}{2}$
 - B $9x + 5y = 2$
 - C $y - 13 = \frac{9}{2}(x + 5)$
 - D $y - 5 = -\frac{9}{2}(x + 3)$

10 The school's mathematics department sponsors a family math game night every year. The first year there were 55 participants and the second year there were 80 participants. Which of the following equations can be used to predict the amount of participants, y , for any year, x , thereafter?

A $25x - y = -30$

B $f(x) = 25x - 80$

C $25x + y = 30$

D $f(x) = 25x + 80$