

A.A.34: Writing Linear Equations: Write the equation of a line, given its slope and the coordinates of a point on the line

- 1 What is an equation of the line that passes through the point $(4, -6)$ and has a slope of -3 ?
 - 1) $y = -3x + 6$
 - 2) $y = -3x - 6$
 - 3) $y = -3x + 10$
 - 4) $y = -3x + 14$
- 2 What is an equation of the line that passes through the point $(3, -1)$ and has a slope of 2 ?
 - 1) $y = 2x + 5$
 - 2) $y = 2x - 1$
 - 3) $y = 2x - 4$
 - 4) $y = 2x - 7$
- 3 Which equation represents the line that passes through the point $(1, 5)$ and has a slope of -2 ?
 - 1) $y = -2x + 7$
 - 2) $y = -2x + 11$
 - 3) $y = 2x - 9$
 - 4) $y = 2x + 3$
- 4 What is an equation of the line that passes through the point $(-2, -8)$ and has a slope of 3 ?
 - 1) $y = 3x - 2$
 - 2) $y = 3x - 22$
 - 3) $y = 3x + 2$
 - 4) $y = 3x + 22$
- 5 An equation of the line that has a slope of 3 and a y-intercept of -2 is
 - 1) $x = 3y - 2$
 - 2) $y = 3x - 2$
 - 3) $y = -\frac{2}{3}x$
 - 4) $y = -2x + 3$
- 6 Which equation represents the line whose slope is 2 and whose y-intercept is 6 ?
 - 1) $y = 2x + 6$
 - 2) $y = 6x + 2$
 - 3) $2y + 6x = 0$
 - 4) $y + 2x = 6$
- 7 Which equation represents a line that has a slope of $\frac{3}{4}$ and passes through the point $(2, 1)$?
 - 1) $3y = 4x - 5$
 - 2) $3y = 4x + 2$
 - 3) $4y = 3x - 2$
 - 4) $4y = 3x + 5$
- 8 What is the equation of the line that passes through the point $(3, -7)$ and has a slope of $-\frac{4}{3}$?
 - 1) $y = -\frac{4}{3}x + 3$
 - 2) $y = -\frac{4}{3}x - 3$
 - 3) $y = \frac{37}{3}x - \frac{4}{3}$
 - 4) $y = -\frac{59}{9}x - \frac{4}{3}$
- 9 If point $(-1, 0)$ is on the line whose equation is $y = 2x + b$, what is the value of b ?
 - 1) 1
 - 2) 2
 - 3) 3
 - 4) 0
- 10 A line having a slope of $\frac{3}{4}$ passes through the point $(-8, 4)$. Write the equation of this line in slope-intercept form.

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Answer Section

1 ANS: 1

$$y = mx + b$$

$$-6 = (-3)(4) + b$$

$$b = 6$$

REF: 060922ia

2 ANS: 4

$$y = mx + b$$

$$-1 = (2)(3) + b$$

$$b = -7$$

REF: 080927ia

3 ANS: 1

$$y = mx + b$$

$$5 = (-2)(1) + b$$

$$b = 7$$

REF: 081108ia

4 ANS: 1

$$y = mx + b$$

$$-8 = (3)(-2) + b$$

$$b = -2$$

REF: 011406ia

5 ANS: 2

REF: 010408a

6 ANS: 1

REF: 010905a

7 ANS: 3

$$y = mx + b \quad y = \frac{3}{4}x - \frac{1}{2}$$

$$1 = \left(\frac{3}{4} \right)(2) + b \quad 4y = 3x - 2$$

$$1 = \frac{3}{2} + b$$

$$b = -\frac{1}{2}$$

REF: 081219ia

8 ANS: 2

$$y = mx + b$$

$$-7 = \left(-\frac{4}{3}\right)(3) + b$$

$$-7 = -4 + b$$

$$b = -3$$

REF: 061419ia

9 ANS: 2

$$y = 2x + b$$

$$0 = 2(-1) + b$$

$$b = 2$$

REF: 060521a

10 ANS:

$$y = \frac{3}{4}x + 10. \quad y = mx + b$$

$$4 = \frac{3}{4}(-8) + b$$

$$4 = -6 + b$$

$$10 = b$$

REF: 011134ia