

A.REI.D.10: Writing Linear Equations 1a

- 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 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) $y = -\frac{59}{9}x - \frac{4}{3}$

- 6 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

- 7 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.

- 8 Which equation represents the line that passes through the points $(-1, -2)$ and $(3, 10)$?
 - 1) $y = 3x + 1$
 - 2) $y = 3x - 1$
 - 3) $y = 4x + 2$
 - 4) $y = 4x - 2$

- 9 What is an equation for the line that passes through the coordinates (2,0) and (0,3)?

1) $y = -\frac{3}{2}x + 3$

2) $y = -\frac{3}{2}x - 3$

3) $y = -\frac{2}{3}x + 2$

4) $y = -\frac{2}{3}x - 2$

- 12 What is an equation of the line that passes through the points (2, 1) and (6, -5)?

1) $y = -\frac{3}{2}x - 2$

2) $y = -\frac{3}{2}x + 4$

3) $y = -\frac{2}{3}x - 1$

4) $y = -\frac{2}{3}x + \frac{7}{3}$

- 10 Which equation represents the line that passes through the points (-3,7) and (3,3)?

1) $y = \frac{2}{3}x + 1$

2) $y = \frac{2}{3}x + 9$

3) $y = -\frac{2}{3}x + 5$

4) $y = -\frac{2}{3}x + 9$

- 13 What is an equation of the line that passes through (-2,3) and (6,-1)?

1) $y = -\frac{1}{2}x + 2$

2) $y = -\frac{1}{2}x + 4$

3) $y = 2x + 7$

4) $y = 2x - 1$

- 11 Which equation represents the line that passes through the points (1,1) and (-2,7)?

1) $y = -2x + 9$

2) $y = -2x + 3$

3) $y = -\frac{1}{2}x + 8$

4) $y = -\frac{1}{2}x + 6$

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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

$$y = mx + b$$

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

$$-7 = -4 + b$$

$$b = -3$$

REF: 061419ia

6 ANS: 2

$$y = 2x + b$$

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

$$b = 2$$

REF: 060521a

7 ANS:

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

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

$$4 = -6 + b$$

$$10 = b$$

REF: 011134ia

8 ANS: 1

$$m = \frac{10 - -2}{3 - -1} = \frac{12}{4} = 3 \quad y = mx + b$$

$$10 = 3(3) + b$$

$$10 = 9 + b$$

$$1 = b$$

REF: 061515ia

9 ANS: 1

$$m = \frac{3 - 0}{0 - 2} = -\frac{3}{2}. \quad \text{Using the given y-intercept } (0, 3) \text{ to write the equation of the line } y = -\frac{3}{2}x + 3.$$

REF: fall0713ia

10 ANS: 3

$$m = \frac{7 - 3}{-3 - 3} = \frac{4}{-6} = -\frac{2}{3} \quad y = mx + b$$

$$3 = -\frac{2}{3}(3) + b$$

$$3 = -2 + b$$

$$5 = b$$

REF: 011013ia

11 ANS: 2

$$m = \frac{1 - 7}{1 - -2} = \frac{-6}{3} = -2 \quad y = mx + b$$

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

$$3 = b$$

REF: 081404ia

12 ANS: 2

$$m = \frac{1 - (-5)}{2 - 6} = \frac{6}{-4} = -\frac{3}{2} \quad 1 = \left(-\frac{3}{2}\right)(2) + b$$

$$1 = -3 + b$$

$$4 = b$$

REF: 011510ia

13 ANS: 1

$$m = \frac{3 - (-1)}{-2 - 6} = \frac{4}{-8} = -\frac{1}{2} \quad 3 = \left(-\frac{1}{2}\right)(-2) + b$$

$$3 = 1 + b$$

$$2 = b$$

REF: 061606ia