

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

- 1 What is an equation of the line that passes through the point $(4, -6)$ and has a slope of -3 ?
- 2 What is an equation of the line that passes through the point $(3, -1)$ and has a slope of 2 ?
- 3 Which equation represents the line that passes through the point $(1, 5)$ and has a slope of -2 ?
- 4 What is an equation of the line that passes through the point $(-2, -8)$ and has a slope of 3 ?
- 5 What is the equation of the line that passes through the point $(3, -7)$ and has a slope of $-\frac{4}{3}$?
- 6 If point $(-1, 0)$ is on the line whose equation is $y = 2x + b$, what is the value of b ?
- 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 $(3, 10)$?
- 9 What is an equation for the line that passes through the coordinates $(2, 0)$ and $(0, 3)$?
- 10 Which equation represents the line that passes through the points $(-3, 7)$ and $(3, 3)$?
- 11 Which equation represents the line that passes through the points $(1, 1)$ and $(-2, 7)$?
- 12 What is an equation of the line that passes through the points $(2, 1)$ and $(6, -5)$?
- 13 What is an equation of the line that passes through $(-2, 3)$ and $(6, -1)$?

A.REI.D.10: Writing Linear Equations 1b
Answer Section

1 ANS:

$$y = -3x + 6$$

$$y = mx + b$$

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

$$b = 6$$

REF: 060922ia

2 ANS:

$$y = 2x - 7$$

$$y = mx + b$$

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

$$b = -7$$

REF: 080927ia

3 ANS:

$$y = -2x + 7$$

$$y = mx + b$$

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

$$b = 7$$

REF: 081108ia

4 ANS:

$$y = 3x - 2$$

$$y = mx + b$$

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

$$b = -2$$

REF: 011406ia

5 ANS:

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

$$y = mx + b$$

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

$$-7 = -4 + b$$

$$b = -3$$

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:

$$y = 3x + 1$$

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

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

$$10 = 9 + b$$

$$1 = b$$

REF: 061515ia

9 ANS:

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

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

REF: fall0713ia

10 ANS:

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

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

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

$$3 = -2 + b$$

$$5 = b$$

REF: 011013ia

11 ANS:

$$y = -2x + 3$$

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

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

$$3 = b$$

REF: 081404ia

12 ANS:

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

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

$$1 = -3 + b$$

$$4 = b$$

REF: 011510ia

13 ANS:

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

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

$$3 = 1 + b$$

$$2 = b$$

REF: 061606ia