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

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 Which equation represents the line that passes through the points $(-1,8)$ and $(4,-2)$?
1) $y=-2x+6$ 2) $y=-2x+10$
3) $y=-0.5x+7.5$ 4) $y=-0.5x+8.5$

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

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

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

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

14 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) $y=2x-1$

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

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

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

$4 = -6 + b$

$10 = b$

REF: 011134ia

8 ANS: 1

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

$10 = 3(3) + b$

$10 = 9 + b$

$1 = b$

REF: 061515ia

9 ANS: 1

$m = \frac{8 - -2}{-1 - 4} = \frac{10}{-5} = -2$ $y = mx + b$

$8 = -2(-1) + b$

$6 = b$

REF: 012502ai

10 ANS: 1

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

REF: fall0713ia

11 ANS: 3

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

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

$3 = -2 + b$

$5 = b$

REF: 011013ia

12 ANS: 2

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

$1 = -2(1) + b$

$3 = b$

REF: 081404ia

13 ANS: 2

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

$1 = -3 + b$

$4 = b$

REF: 011510ia

14 ANS: 1

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

$3 = 1 + b$

$2 = b$

REF: 061606ia