6-2 Answers

Write an equation of the line that passes the given point and has the given slope.

1) (1,1); m=3

$y = mx + b$

$1 = 3(1) + b$

$1 = 3 + b$

$-3 \quad -3$

$-2 = b$

$y = 3x - 2$

2) (-4,7); m=-5

$y = mx + b$

$7 = -5(-4) + b$

$7 = 20 + b$

$-20 \quad -20$

$-13 = b$

$y = -5x - 13$

3) (8, -4) $m = -\frac{3}{4}$

$y = mx + b$

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

$-4 = -6 + b$

$+6 \quad +6$

$2 = b$

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

4) Describe and correct the error in finding the y-intercept of the line that passes through the point (6, -3) and has a slope of -2. Subbed x and y in wrong

$-3 = -2(6) + b$

$-3 = -12 + b$

$+12 \quad +12$

$9 = b$

$y = -2x + 9$

Write an equation of the line that passes through the given points.

5) (1,4), (2, 7)

$m = \frac{7-4}{2-1} = \frac{3}{1} = 3$

$4 = 3(1) + b$

$4 = 3 + b$

$-3 \quad -3$

$1 = b$

$y = 3x + 1$

6) (10, -5), (-5, 1)

$\frac{1+5}{-5+10} = \frac{6}{-15} = -\frac{2}{5}$

$-5 = \left(-\frac{2}{5}\right)(10) + b$

$-5 = -4 + b$

$+4 \quad +4$

$-1 = b$

$y = -\frac{2}{5}x - 1$

Write an equation of the line (see book).

7) $m = \frac{4}{1} = 4$

$1 = 4(4) + b$

$1 = 16 + b$

$-16 \quad -16$

$-15 = b$

$y = 4x - 15$

8) $m = \frac{-2}{4} = -\frac{1}{2}$

$0 = (-\frac{1}{2})(1) + b$

$0 = -\frac{1}{2} + b$

$+\frac{1}{2} \quad +\frac{1}{2}$

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

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

9) f(-2) = 15, f(1)=9 (-2,15)(1,9)

$\frac{15-9}{-2-1} = \frac{6}{-3} = -2$

$9 = -2(1) + b$

$9 = -2 + b$

$+2 \quad +2$

$11 = b$

$y = -2x + 11$

10) f(2)= 7, f(4)=6 (2,7) (4,6)

$m = \frac{6-7}{4-2} = \frac{-1}{2}$

$6 = -\frac{1}{2}(4) + b$

$6 = -2 + b$

$+2 \quad +2$

$8 = b$

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

Write an equation that represents the linear function shown in the table or mapping diagram.(see book).

11) (9,0)(6,2) $\frac{2-0}{6-9} = \frac{2}{-3}$

$0 = -\frac{2}{3}(9) + b$

$0 = -6 + b$

$+6 \quad +6$

$6 = b$

$y = -\frac{2}{3}x + 6$

12) (1,2)(2,8) $m = \frac{8-2}{2-1} = \frac{6}{1} = 6$

$2 = 6(1) + b$

$2 = 6 + b$

$-6 \quad -6$

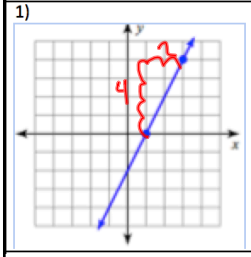
$-4 = b$

$y = 6x - 4$

SKILLZ REVIEW

Find the slope of the line.

1)



$\frac{4}{2} = 2$

Simplify.

2) $-2(4x - 4) + x$

$-8x + 8 + x$

$-7x + 8$

Solve.

3) $-3 = -5 - 2v$

$+5 \quad +5$

$\frac{2}{-2} = \frac{-2v}{-2}$

$-1 = v$