Name: KEY hour: _____ Date: _____ ID: PRACTICE

Quiz on 2.1 - 2.3 PRACTICE

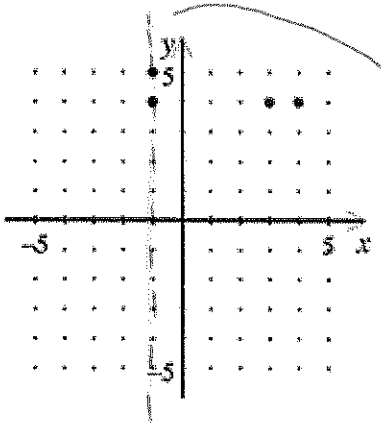
1. Find the range of the relation $\{(2,1),(-3,-1),(-4,5)\}$.

   1, -1, 5

2. Determine whether the relation is a function.
   (2, 6), (3, 6), (4, 7), (5, 8), (6, 8)

   Each input has only one output. Yes

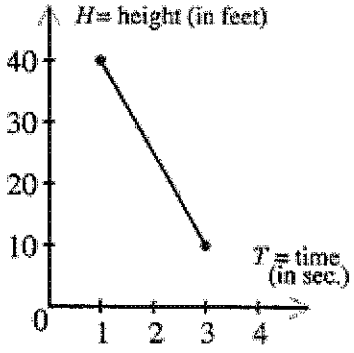
Use the vertical line test to determine if the graph represents *y* as a function of *x*.

3. 

this line passes through 2 points

   No

4. What is the domain and what is the range of the function in the graph?



Domain: $1 \le T \le 3$ Range: $10 \le H \le 40$

5. ***Given*** ***f(x) = 4x - 2.*** ***Evaluate:***

   a. f(5) $f(5) = 4(5) - 2 = 20 - 2$ $f(5) =$ 18

   b. *f(-6)* $f(-6) = 4(-6) - 2 = -24 - 2$ $f(-6) =$ -26

   c. *f(0)* $f(0) = 4(0) - 2 = 0 - 2$ $f(0) =$ -2

6. Find the slope of the line passing through the points (9, –2) and (–4, –5).

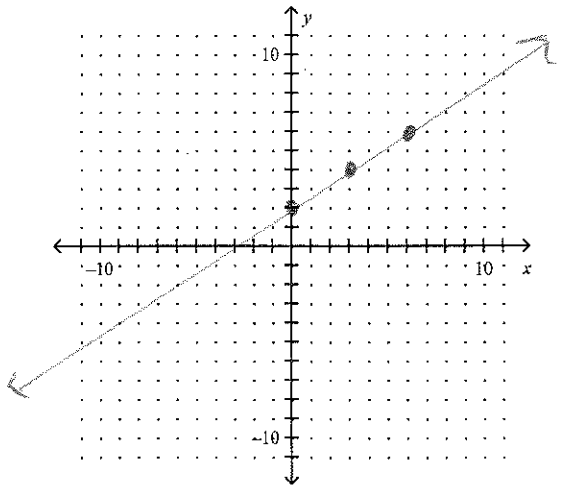
$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-5-(-2)}{-4-9} = \frac{-3}{-13}$ $\frac{3}{13}$

7. Tell whether **Line 1** and **Line 2** are *parallel*, *perpendicular*, or *neither*.

Line 1 passes through (2, –3) and (4, 2) $m = \frac{2-(-3)}{4-2} = \frac{5}{2}$ > these are opposite reciprocals

Line 2 passes through (1, –5) and (–4, –3) $m = \frac{-3-(-5)}{-4-1} = \frac{2}{-5}$ perpendicular

8. Graph $y = \frac{2}{3}x + 2$.



C

9. Find the *x*- and *y*-intercepts of $y = -2x - 5$.

y-int = –5

x-int: $0 = -2x - 5$, $5 = -2x$, $-\frac{5}{2} = x$

a. *x*-intercept: –2; *y*-intercept: –5

c. *x*-intercept: $-\frac{5}{2}$; *y*-intercept: –5

b. *x*-intercept: –5; *y*-intercept: $-\frac{5}{2}$

d. *x*-intercept: –5; *y*-intercept: –2

10. Find the slope and *y*-intercept of the graph of $4x + 3y = 24$.

Solve for y:

$m = -\frac{4}{3}$ $b = 8$

$4x + 3y = 24$

$-4x \quad -4x$

$\frac{3y}{3} = \frac{-4x}{3} + \frac{24}{3}$

$y = -\frac{4}{3}x + 8$

slope; y-intercept