

Name: Key

Date: _____

Function HW

Find the domain and range for the following relation.

1. $\{(-3, -7), (-1, -3), (0, -1), (2, 3), (4, 7)\}$

Domain: $\{-3, -1, 0, 2, 4\}$
Range: $\{-7, -3, -1, 3, 7\}$

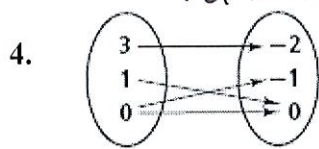
Determine whether each of the following relations is a function.

2. $\{(-4, -3), (-2, -2), (0, -1), (1, -\frac{1}{2})\}$

Function

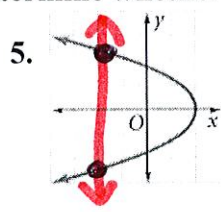
3. $\{(0, 0), (1, 1), (4, 2), (1, -1)\}$

Not Function
1's repeat



Not Function
0's repeat

Determine whether each graph is the graph of a function.



Not Function

6.



Convert the following to slope intercept form. Name the slope and y-intercept.

7. $6x - 5y = 25$

8. $x - y + 12 = 0$

Use the Linear Equation EOG problems from Friday to help you solve the following. SHOW ALL WORK ON A SEPARATE SHEET of notebook paper.

- 9. What is an equation of the line passing through the points $(-1, -3)$ and $(5, 6)$?
- 10. What is an equation of the line passing through the points $(2, 5)$ and $(5, -5)$?
- 11. What is the equation of the line that contains point $(3, -5)$ and has a slope of -3 ?
- 12. What equation has a graph that passes through the origin and has an undefined slope?
- 13. What equation represents a line with a slope of $-1/2$ that passes through point $(6, -4)$?
- 14. What function is represented by the values in the table below?

x	y
-2	-2
-1	2
0	6
1	10
2	14

$$7. \quad 6x - 5y = 25$$

$$\frac{-5y}{-5} = \frac{-6x + 25}{-5}$$

$$y = \frac{6}{5}x - 5$$

$$m = \frac{6}{5} \quad b = -5$$

$$8. \quad x - y + 12 = 0$$

$$x - y = -12$$

$$-y = -x - 12$$

$$\frac{-y}{-1} = \frac{-x - 12}{-1}$$

$$y = x + 12$$

$$m = 1 \quad b = 12$$

$$9. \quad (-1, -3)(5, 6)$$

$x_1 \quad y_1 \quad x_2 \quad y_2$

$$m = \frac{6 - (-3)}{5 - (-1)} = \frac{9}{6} = \frac{3}{2}$$

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

$$6 = \frac{3}{2}(5) + b$$

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

⑩ $(2, 5)(5, -5)$
 $X_1 \ Y_1 \ X_2 \ Y_2$

$$m = \frac{-5 - 5}{5 - 2} = \frac{-10}{3}$$

$$y = \frac{-10}{3}x + b$$

$$5 = \frac{-10}{3}(2) + b$$

$$5 = \frac{-20}{3} + b$$

$$+\frac{20}{3} \quad +\frac{20}{3}$$

$$\frac{35}{3} = b$$

$$y = \frac{-10}{3}x + \frac{35}{3}$$

⑪

$$m = -3$$

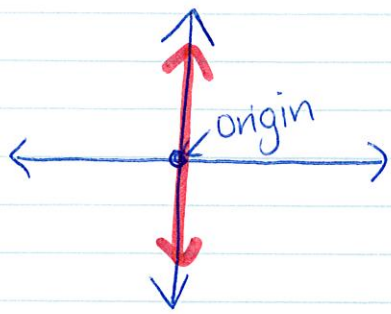
$$\text{point} = (3, -5)$$

$$y = -3x + b$$

$$-5 = -3(3) + b$$

$$y = -3x + 4$$

12



Vertical
Undefined
 $x=0$

13

$$m = -\frac{1}{2}$$

$$\text{point} = (6, -4)$$

$x \quad y$

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

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

$$\begin{array}{r} -4 \neq -3 + b \\ +3 \quad +3 \\ \hline -1 \neq \quad b \end{array}$$

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

14 ① Find slope

$$\begin{array}{cc} (0, 6) & (1, 10) \\ x_1, y_1 & x_2, y_2 \end{array}$$

$$m = \frac{10-6}{1-0} = \frac{4}{1} = 4$$

② Find y-intercept (where $x=0$)

$$y\text{-int}(b) = 6$$

③ Plug into slope-intercept formula.

$$y = 4x + 6$$