

Domain: Possible x values

Range: Possible y-values

1. Find the domain and range of the following relations:

a) $\{(8, 12), (-3, 7)\}$ Domain $\{8, -3\}$
 Range $\{12, 7\}$

b) $\{(1, 4), (5, 4), (0, 4)\}$ D: $\{1, 5, 0\}$
 R: $\{4\}$

2. Determine whether the pairs $(4, 2)$, $(-1, -4)$, and $(2, 5)$ are solutions of the equation $y = 3x - 1$.

$y = 3x - 1$ Check each pair:

$(4, 2)$
 $2 = 3(4) - 1$
 $2 = 11$ not a solution

$(-1, -4)$
 $-4 = 3(-1) - 1$
 $-4 = -4$ solution

$(2, 5)$
 $5 = 3(2) - 1$
 $5 = 5$ solution

3. Determine whether the pairs $(0, -7)$, $(-2, 10)$, and $(3, 5)$ are solutions of the equation $4a - b = 7$.

Check each pair:

$(0, -7)$
 $4(0) - (-7) = 7$
 $7 = 7$ solution

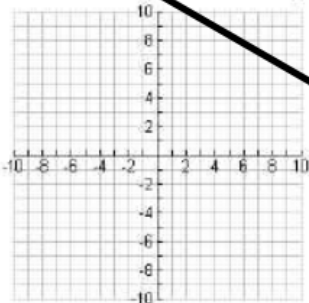
$(-2, 10)$
 $4(-2) - (10) \neq 7$
 $-8 - 10 \neq 7$
 $-18 \neq 7$ no solution

$(3, 5)$
 $4(3) - (5) = 7$
 $12 - 5 = 7$
 $7 = 7$ solution

Graph.

4. $y = \frac{1}{3}x - 2$

m =
b =

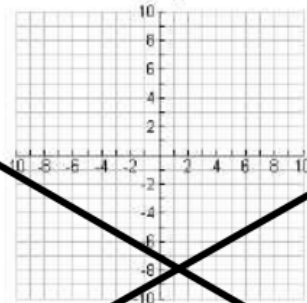


Domain:

Range:

5. $y = x$

m =
b =

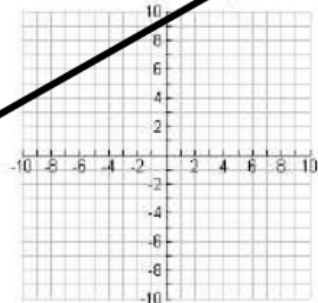


Domain:

Range:

6. $y = -3x + 5$

m =
b =

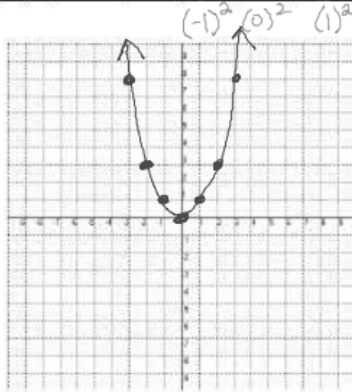


Domain:

Range:

7. Quadratic Function: $y = x^2$

x	-3	-2	-1	0	1	2	3
y	9	4	1	0	1	4	9

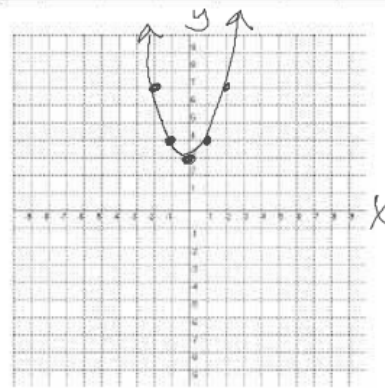


Domain: All real numbers \mathbb{R}

Range: $y \geq 0$

8. $y = x^2 + 3$

x	-3	-2	-1	0	1	2	3
y	12	7	4	3	4	7	12

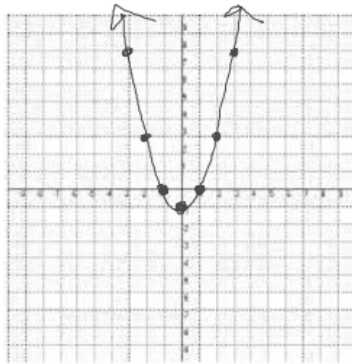


Domain: \mathbb{R}

Range: $y \geq 3$

9. $y = x^2 - 1$

x	-3	-2	-1	0	1	2	3
y	8	3	0	-1	0	3	8

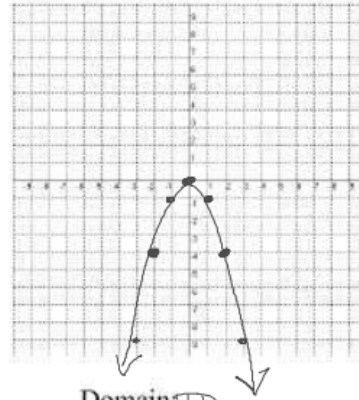


Domain: \mathbb{R}

Range: $y \geq -1$

10. $y = -x^2$

x	-3	-2	-1	0	1	2	3
y	-9	-4	-1	0	-1	-4	-9



Domain: \mathbb{R}

Range: $y \leq 0$

Page 109: 13, 15, 19, 35, 37

Page 114: 9, 11, 13, 15, 21-33 odds

$$\begin{aligned} & (-2)^2 \\ &= (-2)(-2) \\ &= 4 \end{aligned}$$

$$\begin{aligned} & -2^2 \\ &= -2 \cdot 2 \\ &= -4 \end{aligned}$$