

CHAPTER 6 Test

- Write $y = 2x - 3$ in functional notation.
- List three ways to show a relation.

Express each relation as a table and as a graph. Then determine the domain and range.

- $\{(-3, -2), (-1, 4), (0, -1), (2, 3), (3, 3)\}$
- $\{(-1, 1.5), (2, -4), (3, 2.5), (4, -1.5)\}$

Solve each equation if the domain is $\{-2, -1, 0, 4, 6\}$.

- $y = \frac{1}{2}x$
- $y = 4 - x$
- $2x - 2y = 6$

Graph each equation.

- $x = -5$
- $y = -3x - 1$
- $6x - 2y = 8$

Determine whether each relation is a function.

- $\{(4, 1), (2, 4), (-1, 2), (-4, 2)\}$
- $\{(-3, 2), (0, 4), (1, 5), (3, 0), (-3, -1)\}$

13.

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

14.

15.

If $f(x) = -3x + 4$ and $g(x) = 2x + 2$, find each value.

- $f(-1)$
- $g(3.5)$
- $g(\frac{1}{4})$
- $f(2d)$

Solve. Assume that y varies directly as x .

- Find y when $x = 12$ if $y = 18$ when $x = 27$.
- Suppose $y = -84$ when $x = -12$. Find y when $x = -1$.

Solve. Assume that y varies inversely as x .

- Suppose $x = -16$ when $y = 4$. Find x when $y = 8$.
- Find y when $x = 10$ if $y = 2.5$ when $x = 19.2$.

24. **Counting** Refer to the spinners shown.

- Suppose each spinner is spun once. Write a relation that shows the different possible outcomes.
- Use the relation to find the number of ways to land on an odd number and green.

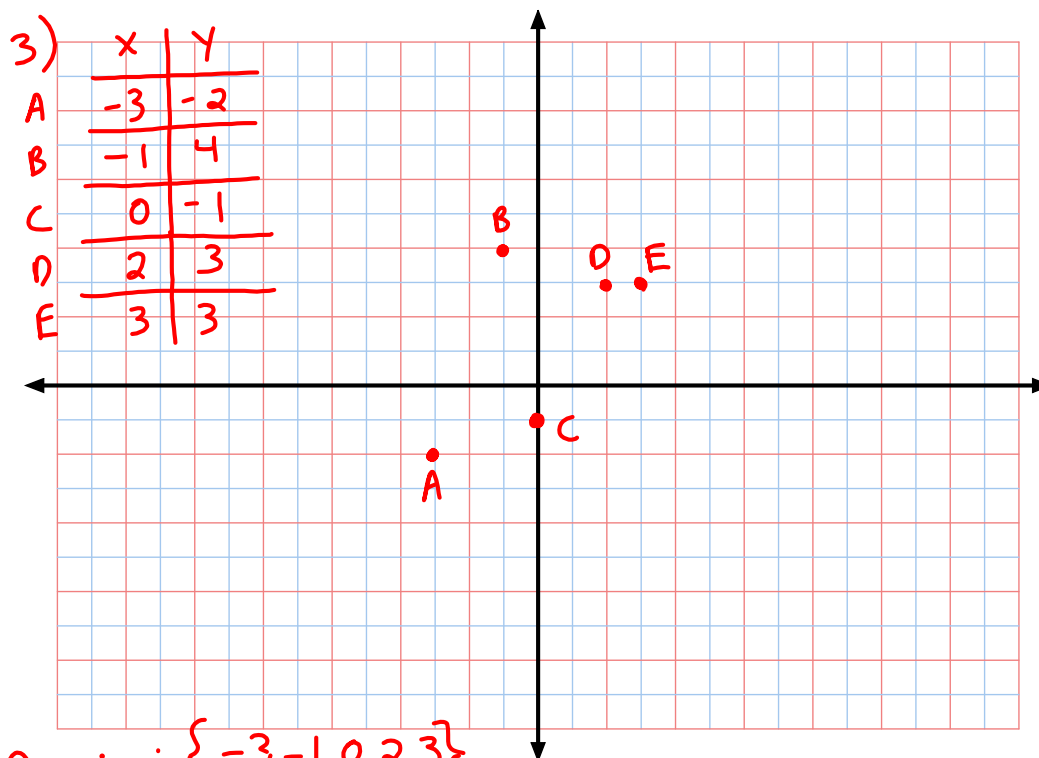
25. **Geometry** To determine the perimeter P of a rectangle, the equation $P = 2w + 2\ell$, where w is the width and ℓ is the length, can be used. Suppose a rectangle has a perimeter of 64 inches. Find the possible dimensions of the rectangle given the domain values $\{3, 6, 7, 10\}$.

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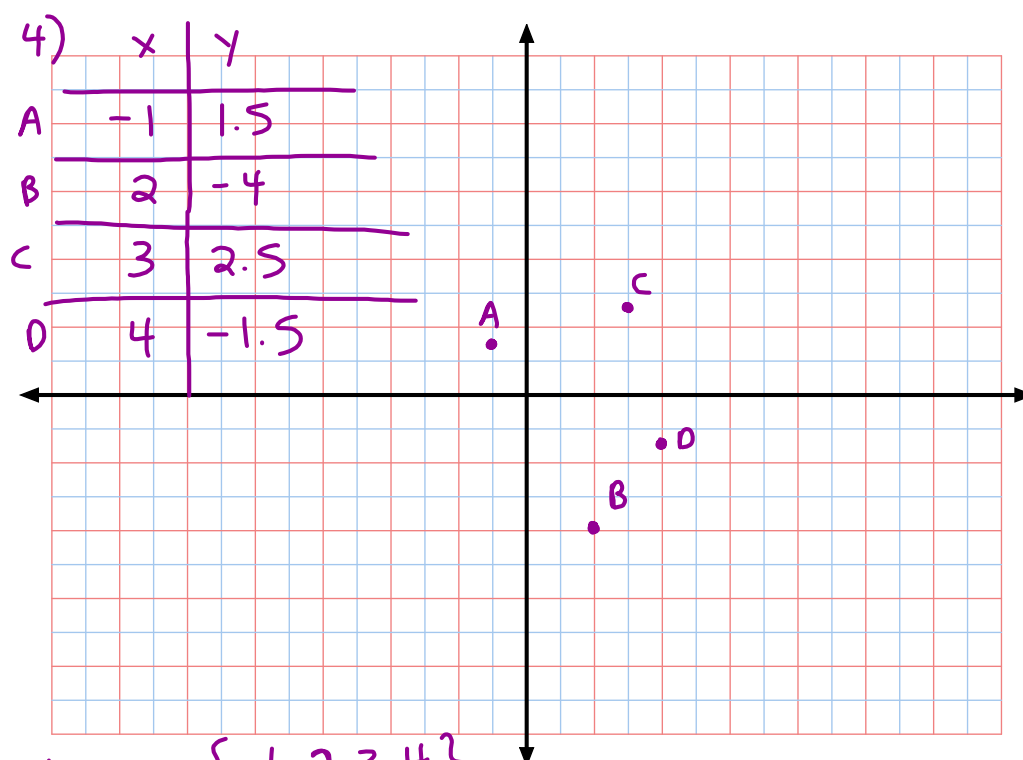
1) $f(x) = 2x - 3$

2) ordered pairs, table, graph



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

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



domain: $\{-1, 2, 3, 4\}$

range: $\{1.5, -4, 2.5, -1.5\}$

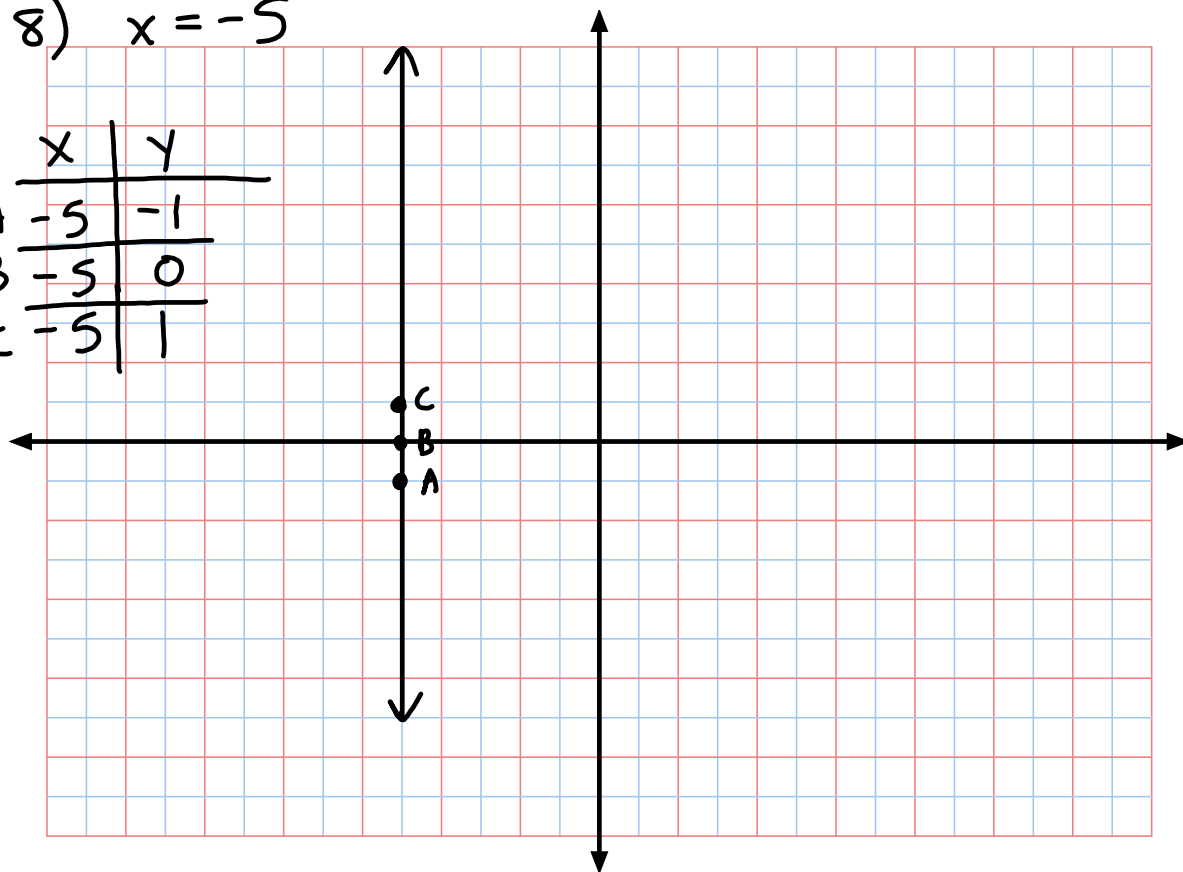
$$5) \text{ range: } \left\{ -1, -\frac{1}{2}, 0, 2, 3 \right\}$$

$$6) \text{ range: } \left\{ 6, 5, 4, 0, -2 \right\}$$

$$7) \text{ range: } \left\{ -5, -4, -3, 1, 3 \right\}$$

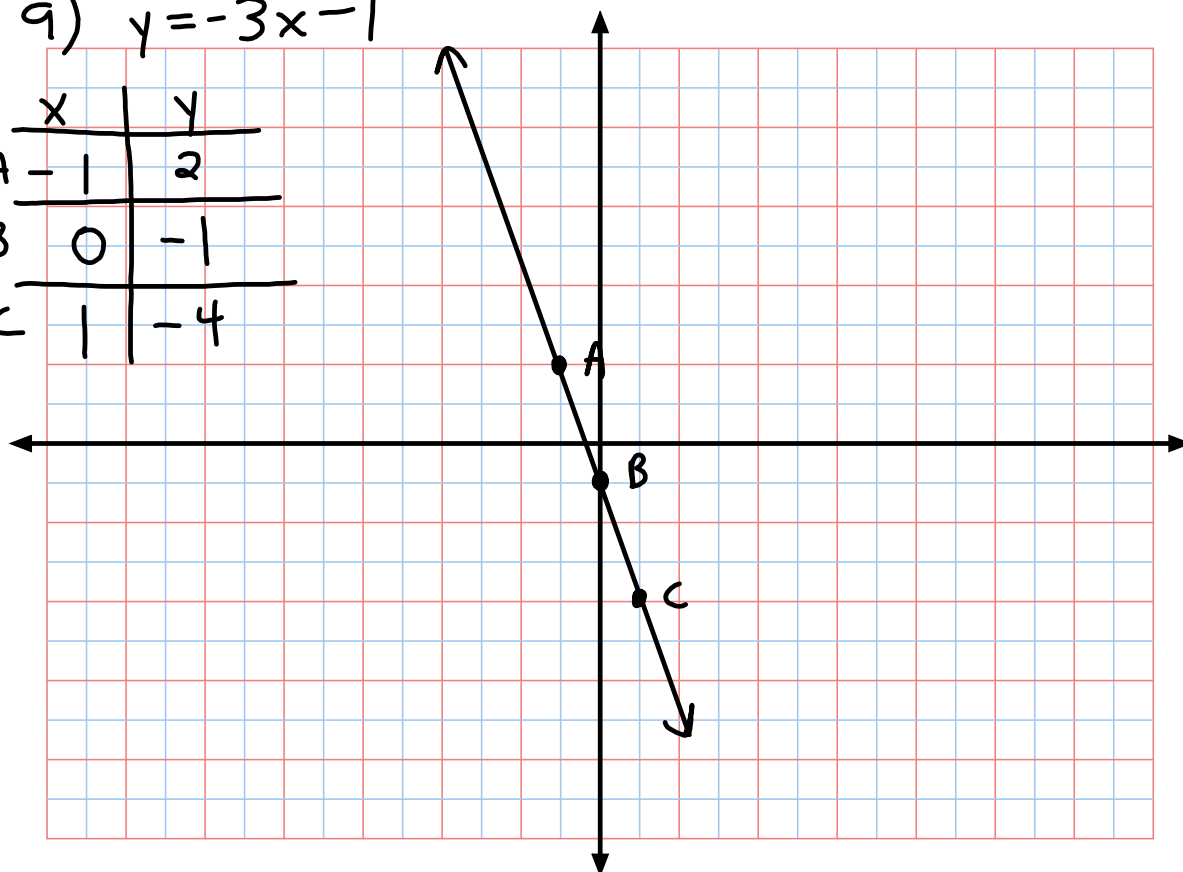
$$8) \ x = -5$$

	x	y
A	-5	-1
B	-5	0
C	-5	1



9) $y = -3x - 1$

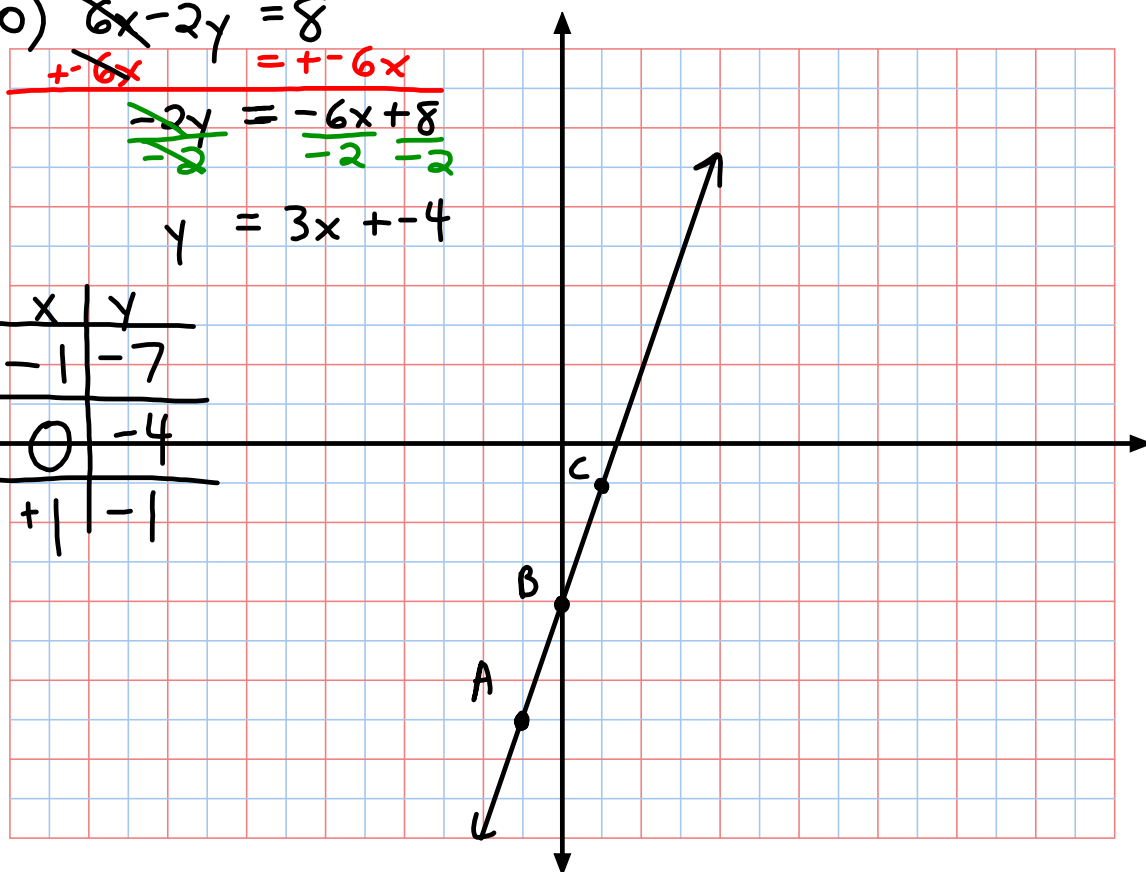
	x	y
A	-1	2
B	0	-1
C	1	-4



10) $6x - 2y = 8$

$$\begin{aligned}
 & \cancel{+6x} \quad = \cancel{+6x} \\
 & \underline{-2y = -6x + 8} \\
 & \quad \quad \quad \underline{-2 \quad -2} \\
 & y = 3x + -4
 \end{aligned}$$

	x	y
A	-1	-7
B	0	-4
C	+1	-1



11) Yes

16) $f(-1) = 7$

12) No

17) $g(3.5) = 9$

13) No

18) $g\left(\frac{1}{4}\right) = 2\frac{1}{2}$ or 2.5

14) Yes

19) $f(2d) = -6d + 4$

15) Yes

20) $y = 8$	24) a.	(1, red)	(1, green)	(1, yellow)
		(2, red)	(2, green)	(2, yellow)
21) $y = -7$		(4, red)	(4, green)	(4, yellow)
		(5, red)	(5, green)	(5, yellow)
22) $x = -8$		(7, red)	(7, green)	(7, yellow)
23) $y = 4.8$		(9, red)	(9, green)	(9, yellow)

b. 4

25) $\{(3, 29), (6, 26), (7, 25), (10, 22)\}$