

Practice

Graph each relation and express it in words.

1.	x	y	2.	x	y	3.	x	y
	3	0		5	4		3	6
	2	1		3	2		1	2
	1	2		1	0		-1	-2
	0	3		-1	-2		-3	-6
	-1	4		-3	-4		-5	-10

Find 5 ordered pairs that satisfy each relation.

Draw each graph.

4. $x + y = 7$ 5. $x + y = 6$ 6. $x - y = 1$
 7. $x - y = 0$ 8. $x + y = 0$ 9. $y - x = 2$

Find 5 ordered pairs that satisfy each relation.

Draw each graph.

10. $y = x + 4$ 11. $y = x - 2$
 12. $y = 2x + 1$ 13. $y = 3x - 4$

Problems and Applications

14. The area of a rectangle is 12 cm^2 .
 a) Copy the table. Complete it for the possible values of the length and width.

Width, w	Length, l	Ordered Pair, (w, l)
1		
2		
3		
4		
6		
12		

- b) Graph the relation and write the coordinates of each point on the grid.
 c) For each point, what does the sum of the coordinates represent?
 d) What are the whole-number dimensions of a 12-cm^2 rectangle that has the smallest perimeter?

15. List 5 ordered pairs of a relation for which the x -coordinate is always 3 and the y -coordinate is an integer. Plot the points on a grid. Describe the result.

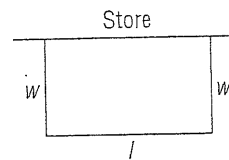
16. List 5 ordered pairs of a relation for which the y -coordinate is always -3 and the x -coordinate is an integer. Plot the points on a grid. Describe the result.

17. Jo-Anna makes ceramic mugs to sell at craft shows. She has two choices to pay for the firing in the kiln.

- A: \$5 set-up charge, plus \$1 per mug
 B: \$0 set-up charge, and \$2 per mug

- a) List the ordered pairs for 1 to 10 mugs using choice A.
 b) List the ordered pairs for 1 to 10 mugs using choice B.
 c) Plot the ordered pairs for each relation on the same grid.
 d) Examine the graphs and decide the number of mugs for which
- both choices give the same cost
 - choice A gives a lower cost
 - choice B gives a lower cost

18. The manager of a supermarket has 24 m of fence available to enclose a rectangular lot for gardening supplies.



One side of the lot will be against the store wall and will not need fencing.

- a) Copy the table. Complete it for the possible whole-number lengths and widths.

Width, w	Length, l	Ordered Pair, (w, l)
1		
2		
⋮		
11		

- b) Graph the relation and write the coordinates of each point on the grid.
 c) For each point, what does the product of the coordinates represent?
 d) What are the whole-number dimensions of the rectangle that has the largest area?