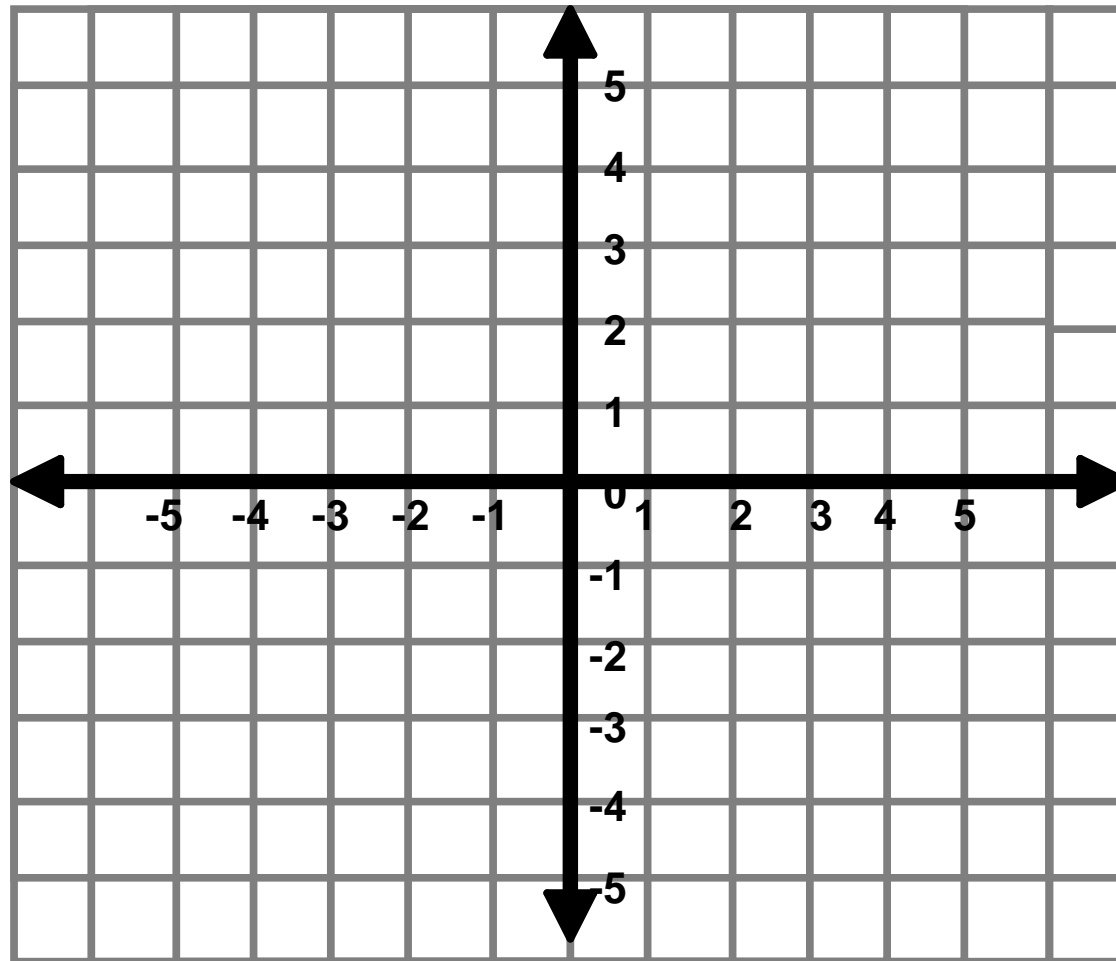


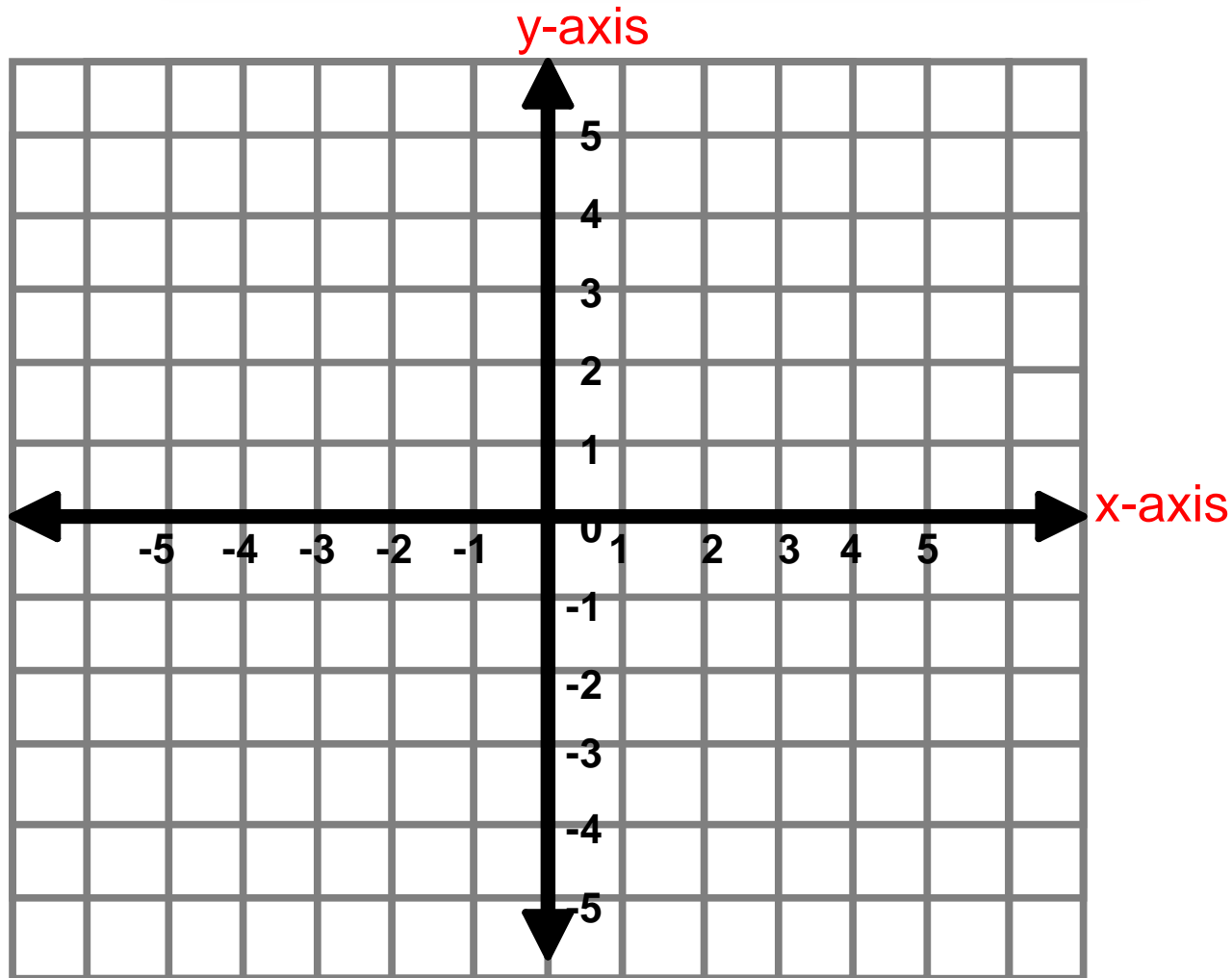
6.2

Representation of Functions

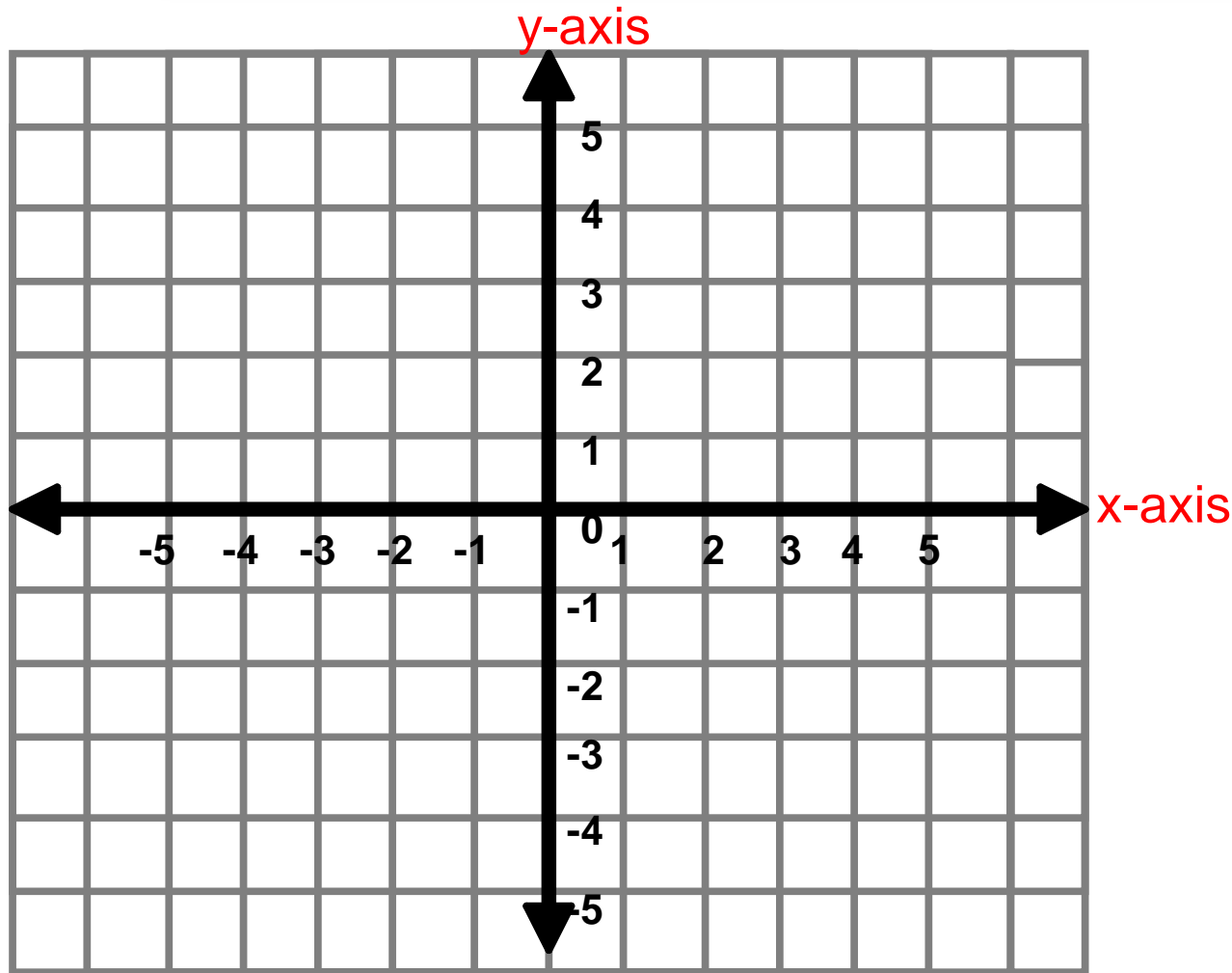
COORDINATE PLANE



COORDINATES



PLOTTING POINTS



Ways to Represent a Function



An output is 2 more than the input.



$$y = x + 2$$

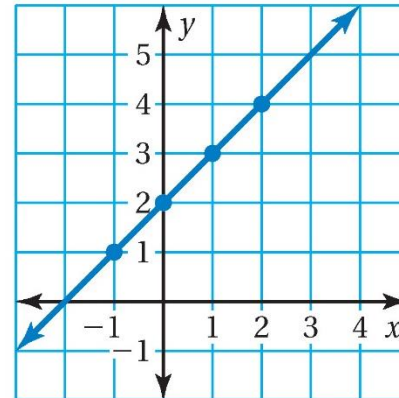
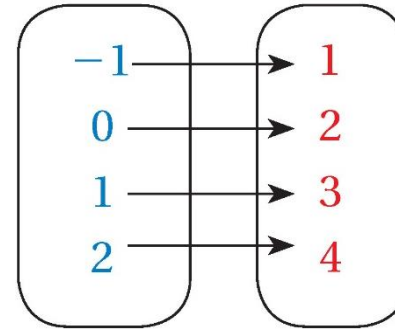


Input, x	Output, y
-1	1
0	2
1	3
2	4

Ways to Represent a Function



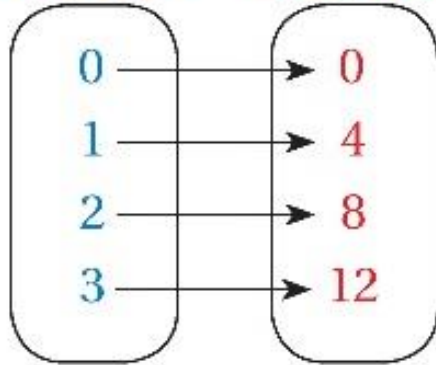
Input, x Output, y



Writing an equation

Write an equation that describes the function.

1) **Input, x** **Output, y**



2)

Input, x	Output, y
1	0
3	-2
5	-4
7	-6

Writing an equation (function rule)

Write a function rule for the statement.

3) The output is eight more than the input.

4) The output is the square of the input.

5) The output is five less than the input.

6) The output is four times the input.

Practice

Write a function rule for the statement.

7) The output is eleven more than the input.

8) The output is the cube of the input.

9) The output is one more than twice the input.

Finding the output...

10) Find the value of $y = 2x + 5$ when $x = 3$?

11) Find the value of $y = -2x + 7$ when $x = 2$?

Practice

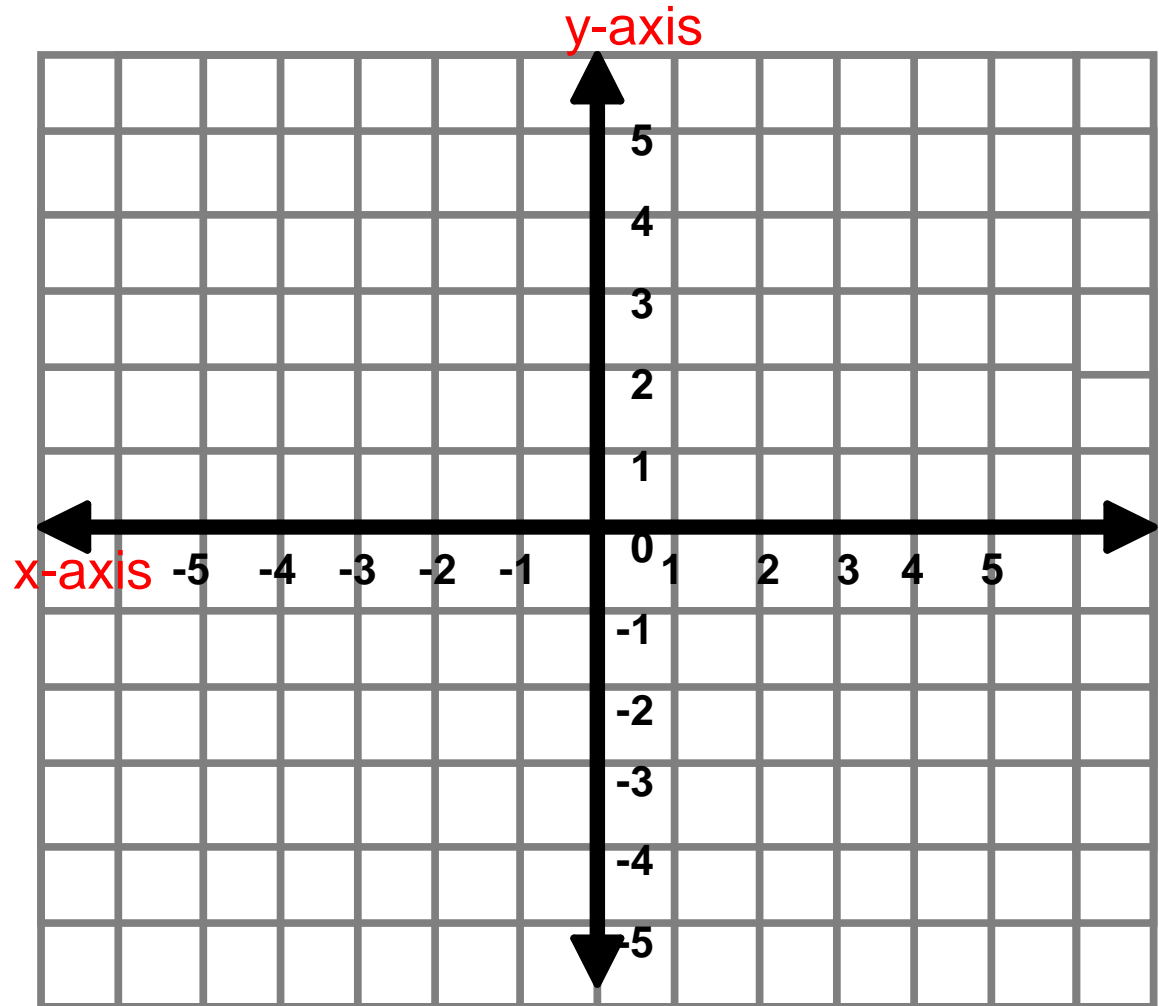
Find the value of y for the given value of x .

$$12) \ y = 7x \ ; \ x = -5$$

$$13) \ y = 3x + 2 \ ; \ x = 0.5$$

$$14) \ y = \frac{x}{2} + 9 \ ; \ x = -12$$

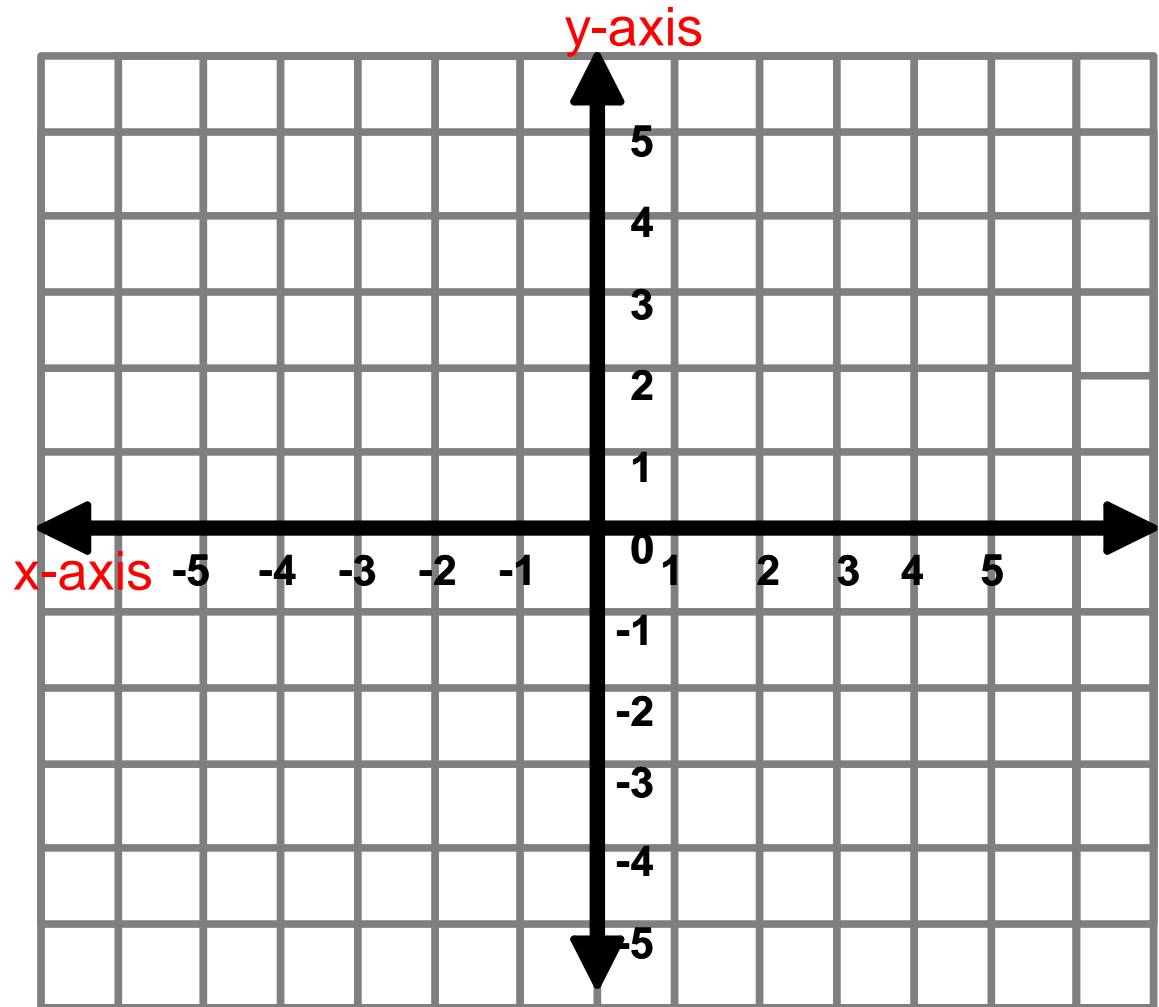
Graph the function $y = -2x + 1$ using inputs of $-1, 0, 1,$ and 2 .
Make an input-output table.



On Your Own

Graph the function

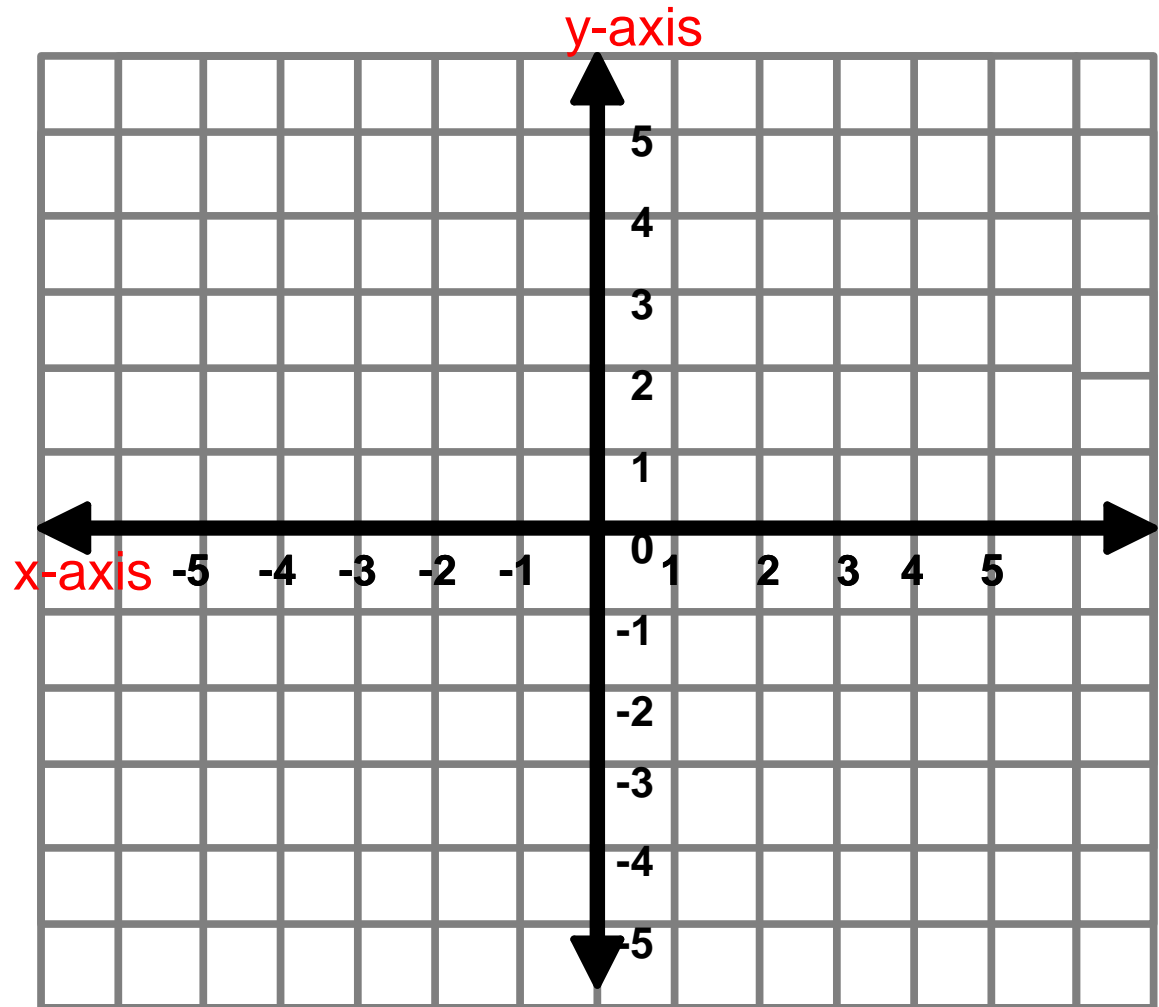
15) $y = x + 1$



On Your Own

Graph the function

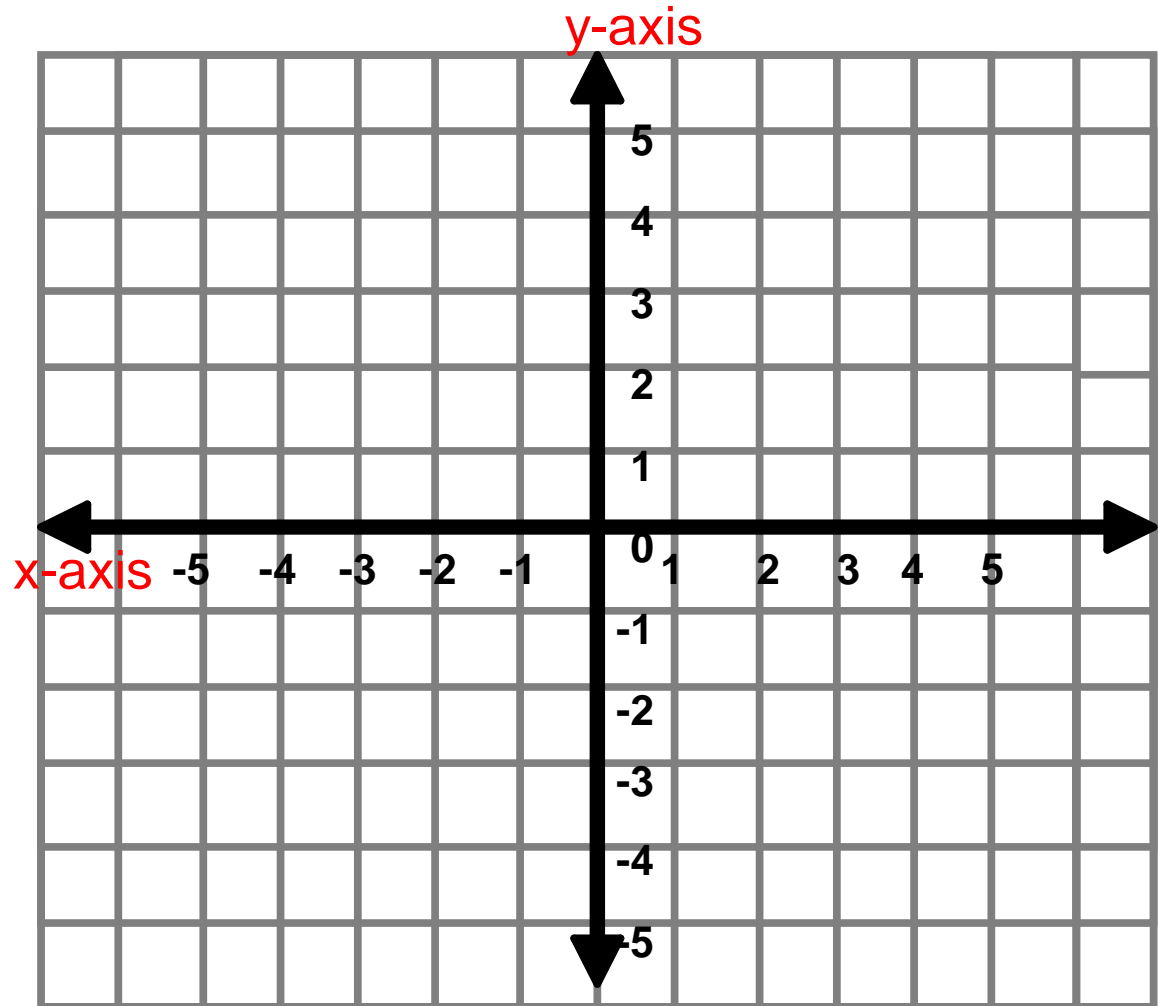
16) $y = -3x$



Graphing

Graph the function

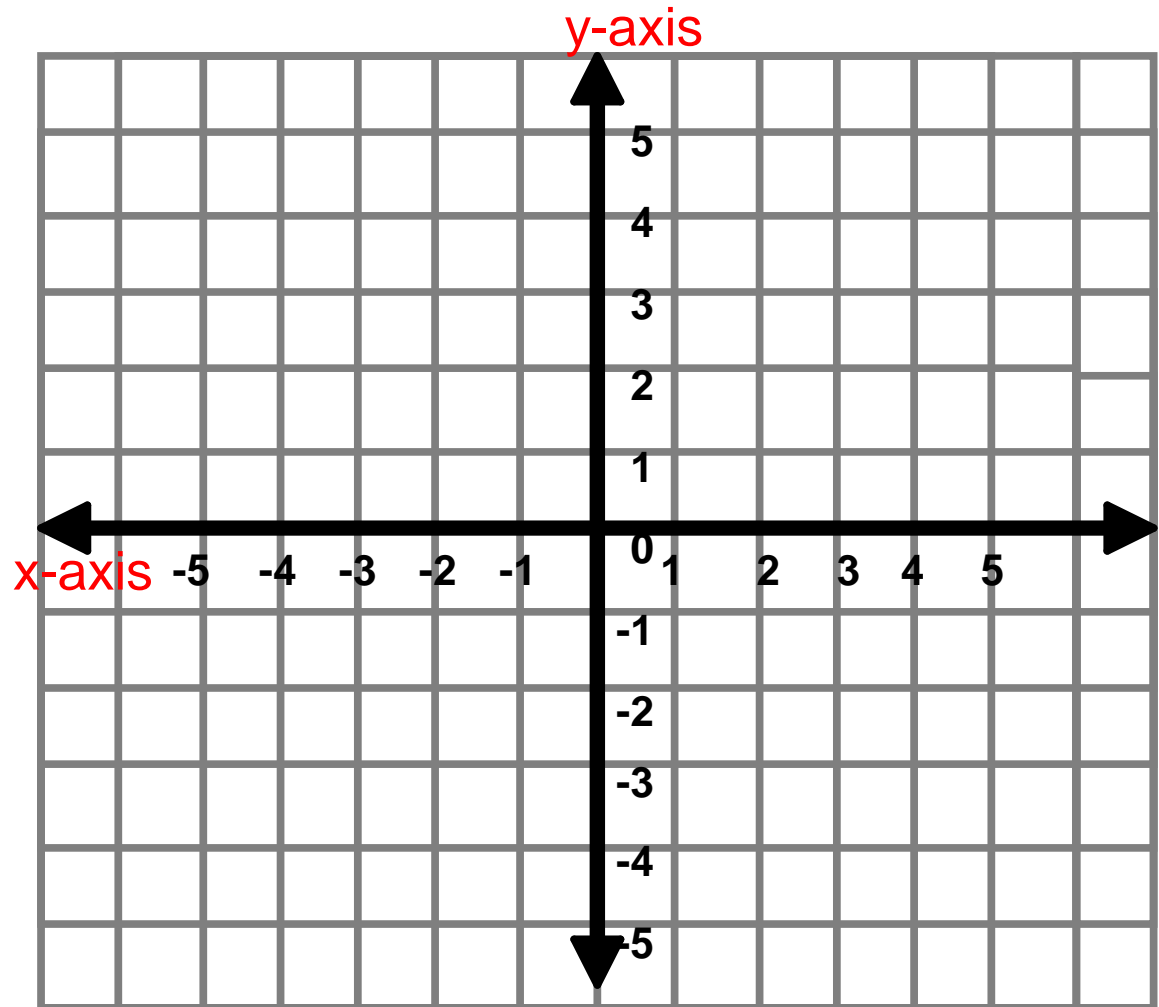
17) $y = 2x$



Graphing

Graph the function

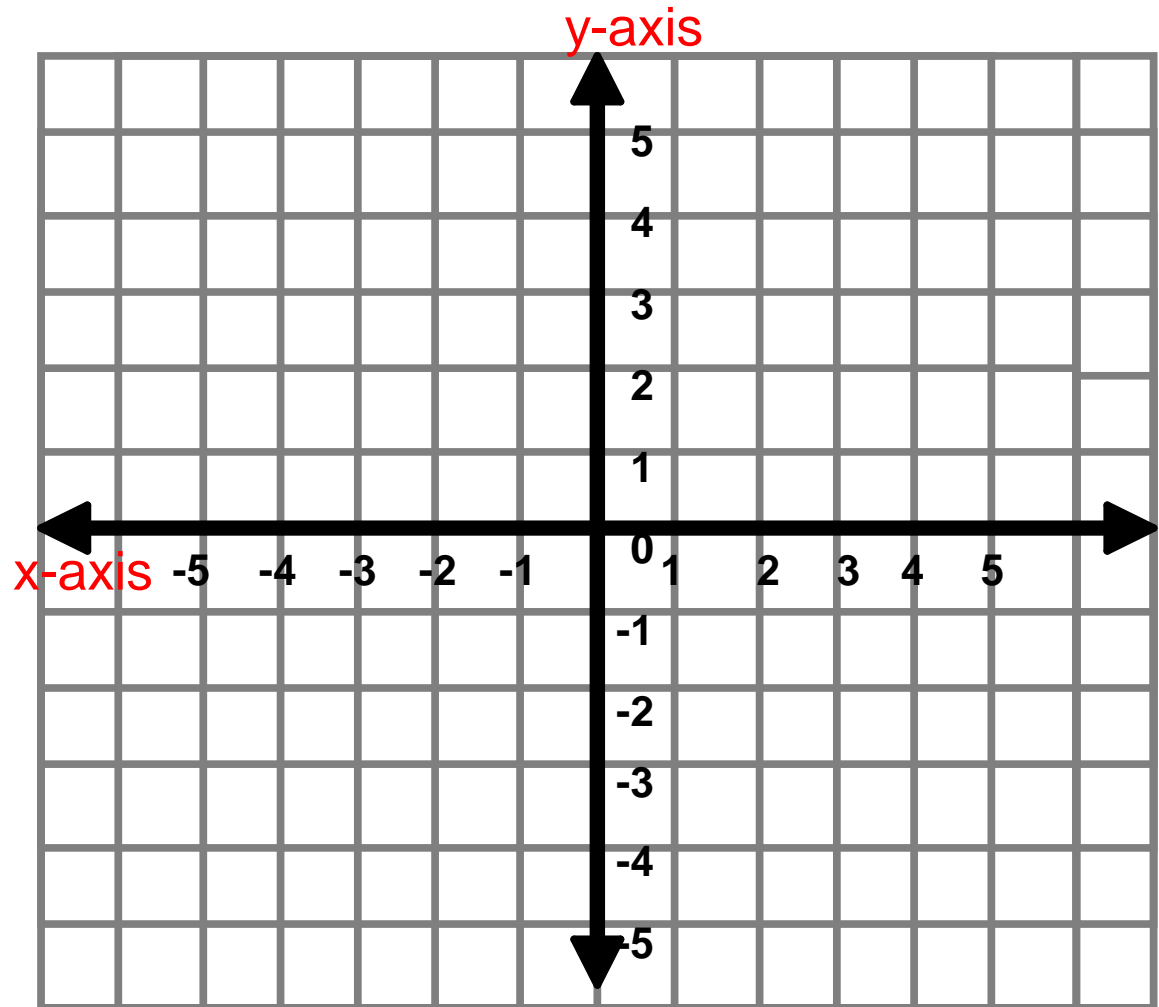
$$18) \ y = \frac{x}{4}$$



Graphing

Graph the function

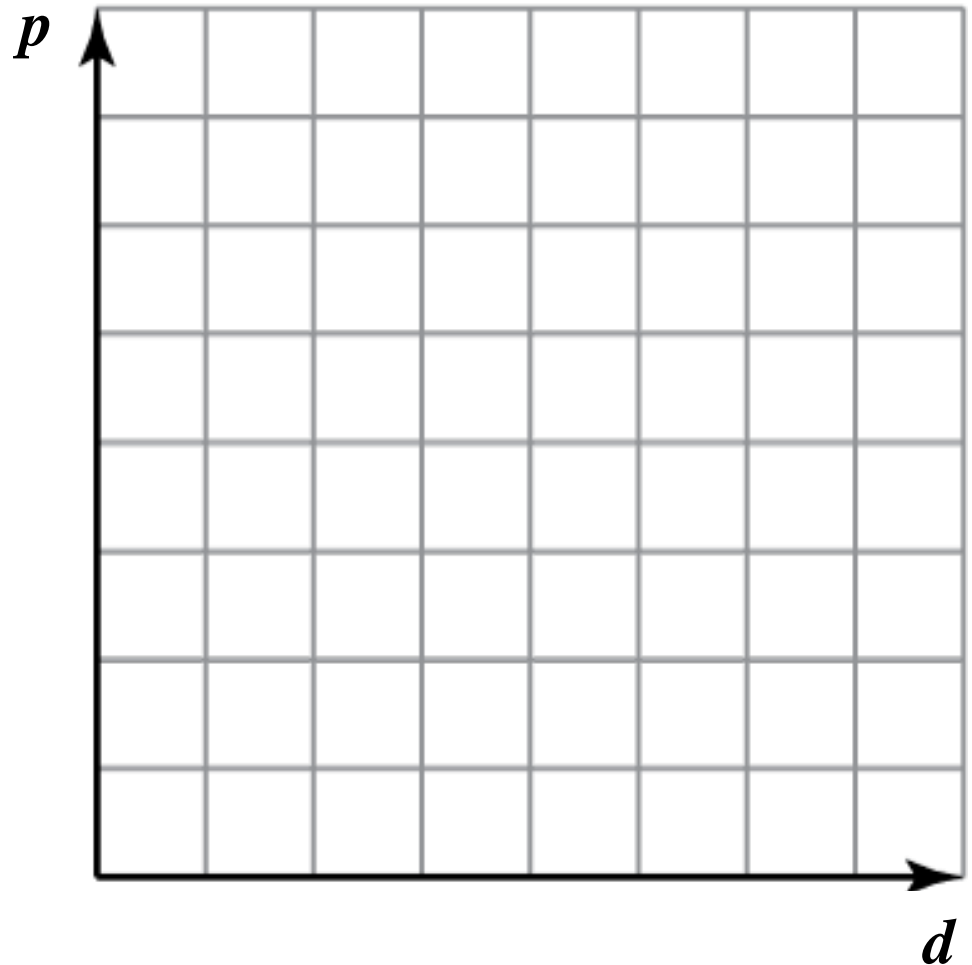
$$19) \quad y = \frac{x}{2} + 1$$



Application...

20) A dolphin eats 30 pounds of fish per day.

a) Write and graph a function that relates the number of pounds p of fish that a dolphin eats in d days.



Application...

21) A dolphin eats 30 pounds of fish per day.

b) How many pounds of fish does a dolphin eat in 30 days?



Finding the input...

Find the value of x for the given value of y .

$$22) \quad y = 5x - 7 \quad ; \quad y = -22$$

Finding the input...

Find the value of x for the given value of y .

$$23) \quad y = \frac{x}{4} - 7 \quad ; \quad y = 2$$