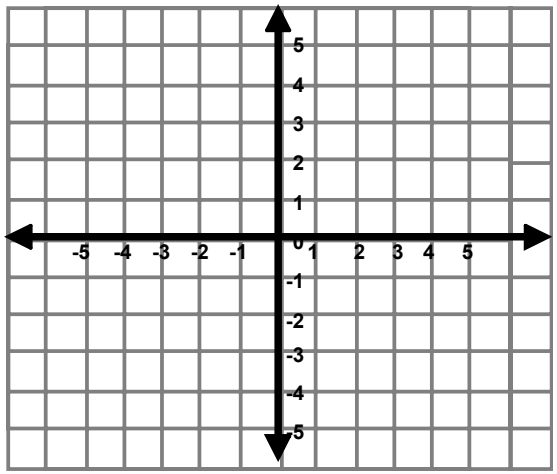
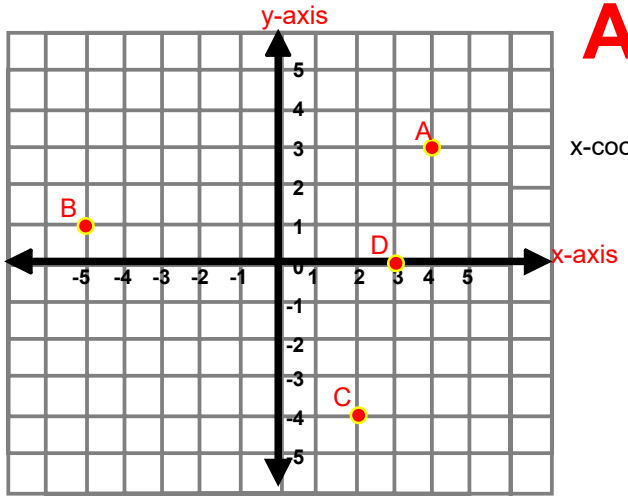
# 6.2

# Representation of Functions

## COORDINATE PLANE



## COORDINATES

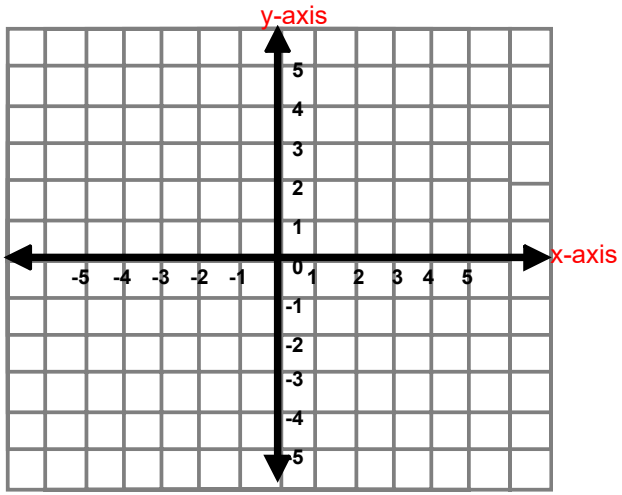



A( , )

x-coordinate

y-coordinate

## PLOTTING POINTS




A(5,2)
B(-3,-4)
C(-1,5)
D(3,-5)
E(4,6)
F(0,0)
G(4,0)
H(0,-3)

# Examples

**a. Write a function rule for "The output is five less than the input."**

**b. Write a function rule for "The output is the square of the input."**

# On Your Own

**a.** Write a function rule for "The output is eight more than the input."

**b.** Write a function rule for "The output is four times the input."

# Examples

**What is the value of $y = 2x + 5$ when $x = 3$?**

What is the value of $y = -2x + 7$ when $x = 2$?

# On Your Own

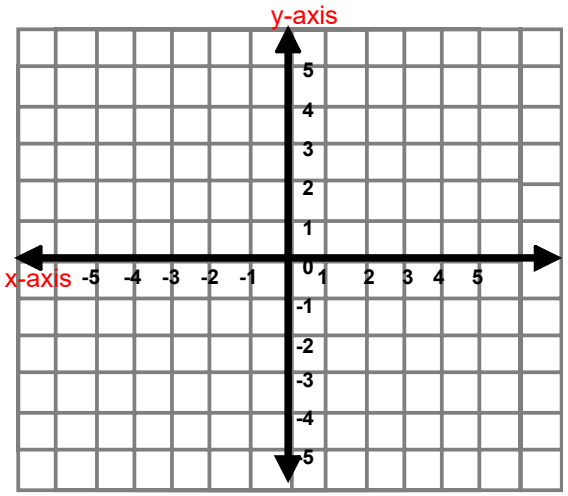
1. Write a function rule for "The output is one-fourth of the input."

**Find the value of $y$ when $x = 5$.**

2. $y = 4x - 1$
3. $y = 10x$
4. $y = 7 - 3x$

**Graph the function $y = -2x + 1$ using inputs of $-1, 0, 1$, and 2.**

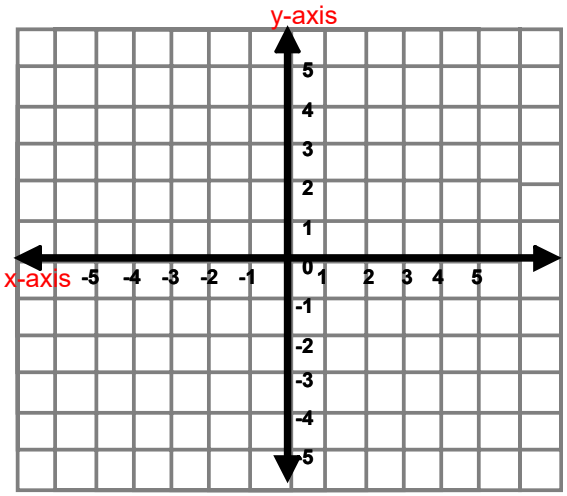
Make an input-output table.




# On Your Own

**Graph the function**

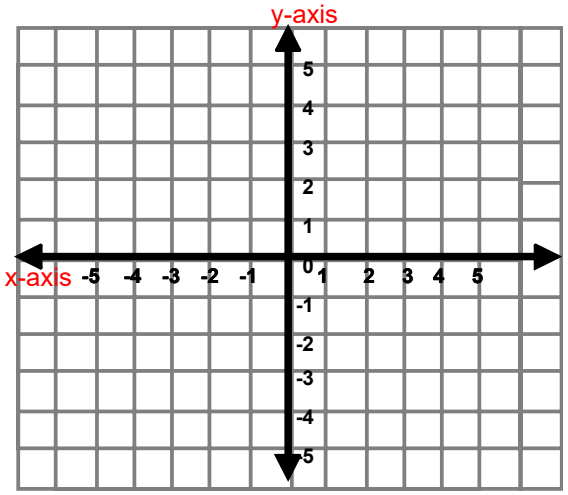
5. $y = x + 1$




# On Your Own

**Graph the function**

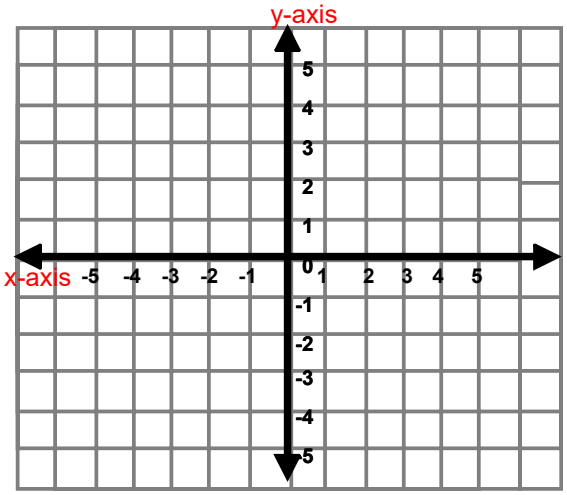
6. $y = -3x$




# On Your Own

**Graph the function**

7. $y = 3x + 2$



**The number of pounds $p$ of carbon dioxide produced by a car is 20 times the number of gallons $g$ of gasoline used by the car. Write and graph a function that describes the relationship between $g$ and $p$.**