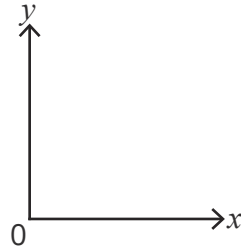




# Coordinates in all 4 Quadrants

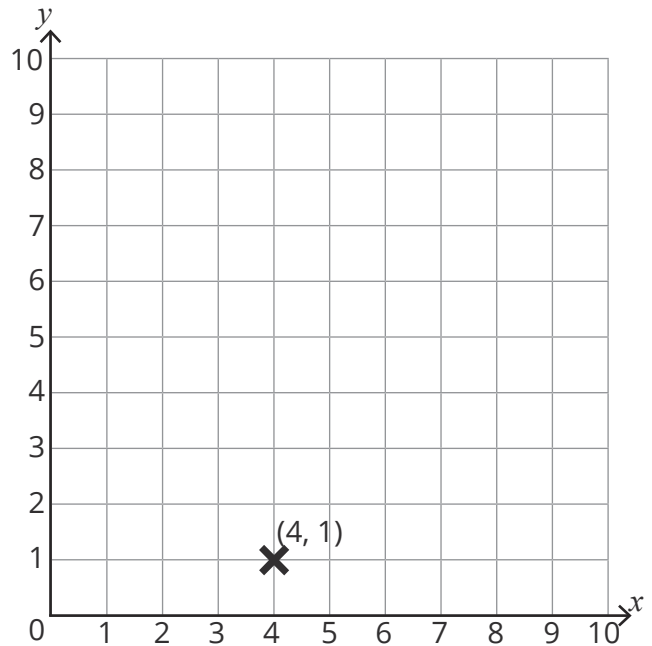
This grid has two **perpendicular** axes: the  $x$ -axis and the  $y$ -axis. **Perpendicular** lines meet at  $90^\circ$  to each other.



A coordinate pair is written  $(x, y)$ .

For example,  $(4, 1)$ .

To plot this **coordinate**, count 4 along the  $x$ -axis and 1 up the  $y$ -axis. Then, mark (plot) the coordinate using either a dot or a cross.



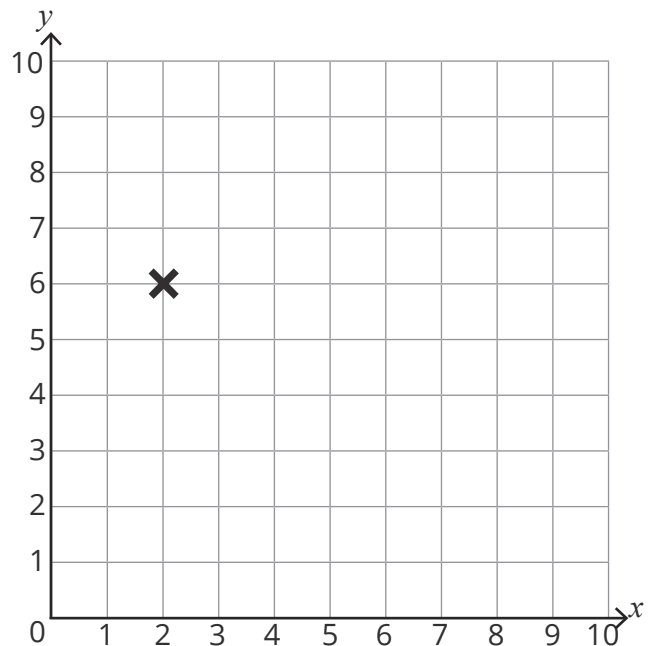
Sometimes, you might be asked to write down a coordinate pair.

For example, write down the coordinate for the point marked **x**.

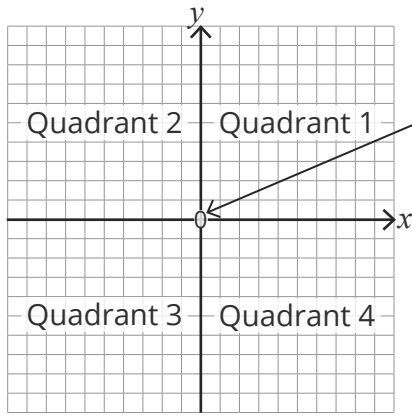
To do this, remember the order:  $x$  before  $y$ . You might hear, 'along the corridor, up the stairs' as a way to remember this.

Count along the  $x$ -axis (2) and then up the  $y$ -axis (6).

The coordinate pair is  $(2, 6)$ .



The grid can be extended into four **quadrants**.

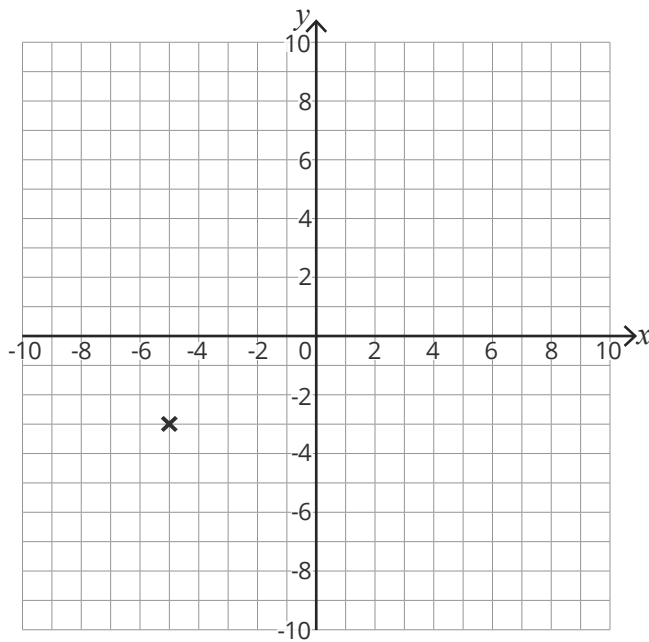


You will find the origin at  $(0, 0)$ . This is where you start from when reading and writing coordinates.

To plot or read coordinate pairs, follow the same order  $(x, y)$ . It's important to remember that  $x$  comes before  $y$ .  $(1, 2)$  and  $(2, 1)$  are different points.

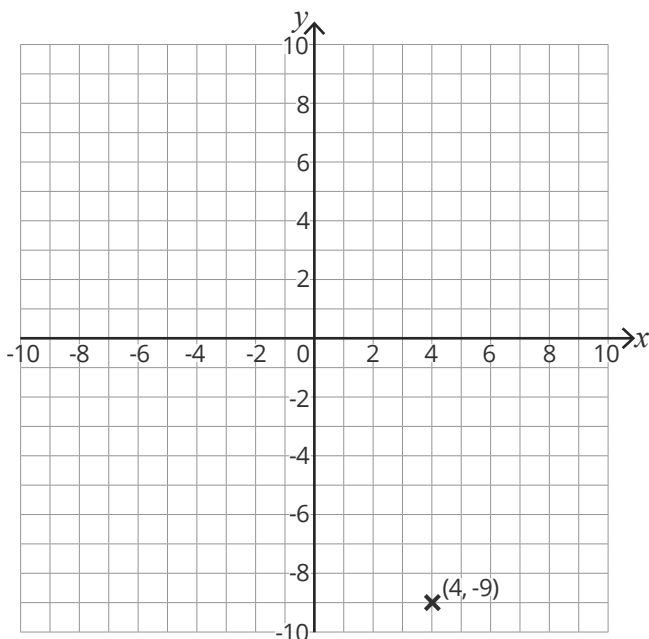
**For example:**

a. Write down the coordinates of the point on the grid.



Again, remember  $x$  before  $y$ . Go along the  $x$ -axis  $(-5)$ , then the  $y$ -axis  $(-3)$ . The coordinate pair is  $(-5, -3)$ .

b. Plot the coordinate  $(4, -9)$ .

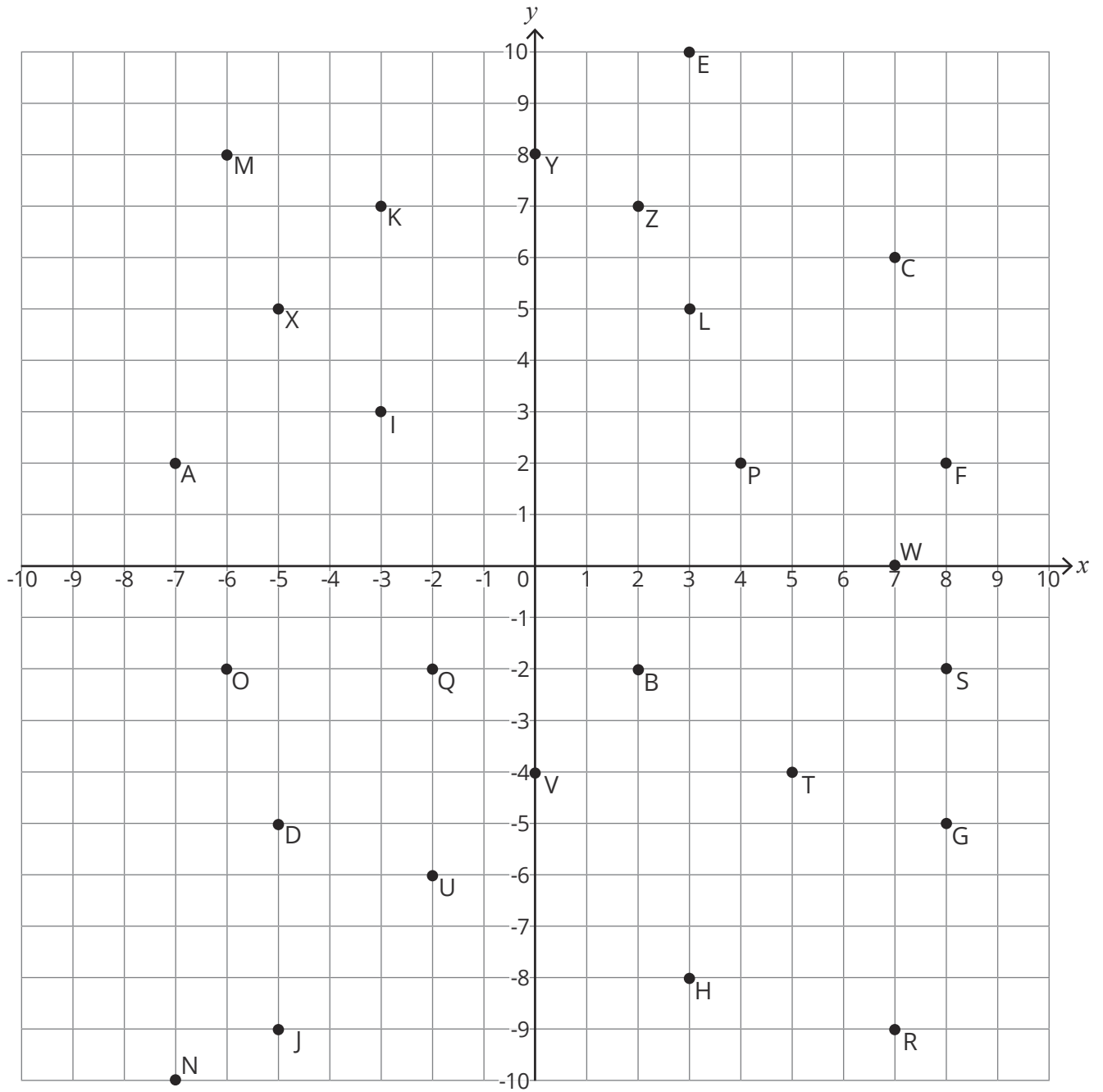


Go along the  $x$ -axis to 4. This time, because you have been given a negative coordinate, you must move down the  $y$ -axis  $(-9)$ . Like before, mark off the point with either a dot or a cross.



### Your Turn

1. Write down the coordinates for each letter.



A \_\_\_\_\_

H \_\_\_\_\_

O \_\_\_\_\_

V \_\_\_\_\_

B \_\_\_\_\_

I \_\_\_\_\_

P \_\_\_\_\_

W \_\_\_\_\_

C \_\_\_\_\_

J \_\_\_\_\_

Q \_\_\_\_\_

X \_\_\_\_\_

D \_\_\_\_\_

K \_\_\_\_\_

R \_\_\_\_\_

Y \_\_\_\_\_

E \_\_\_\_\_

L \_\_\_\_\_

S \_\_\_\_\_

Z \_\_\_\_\_

F \_\_\_\_\_

M \_\_\_\_\_

T \_\_\_\_\_

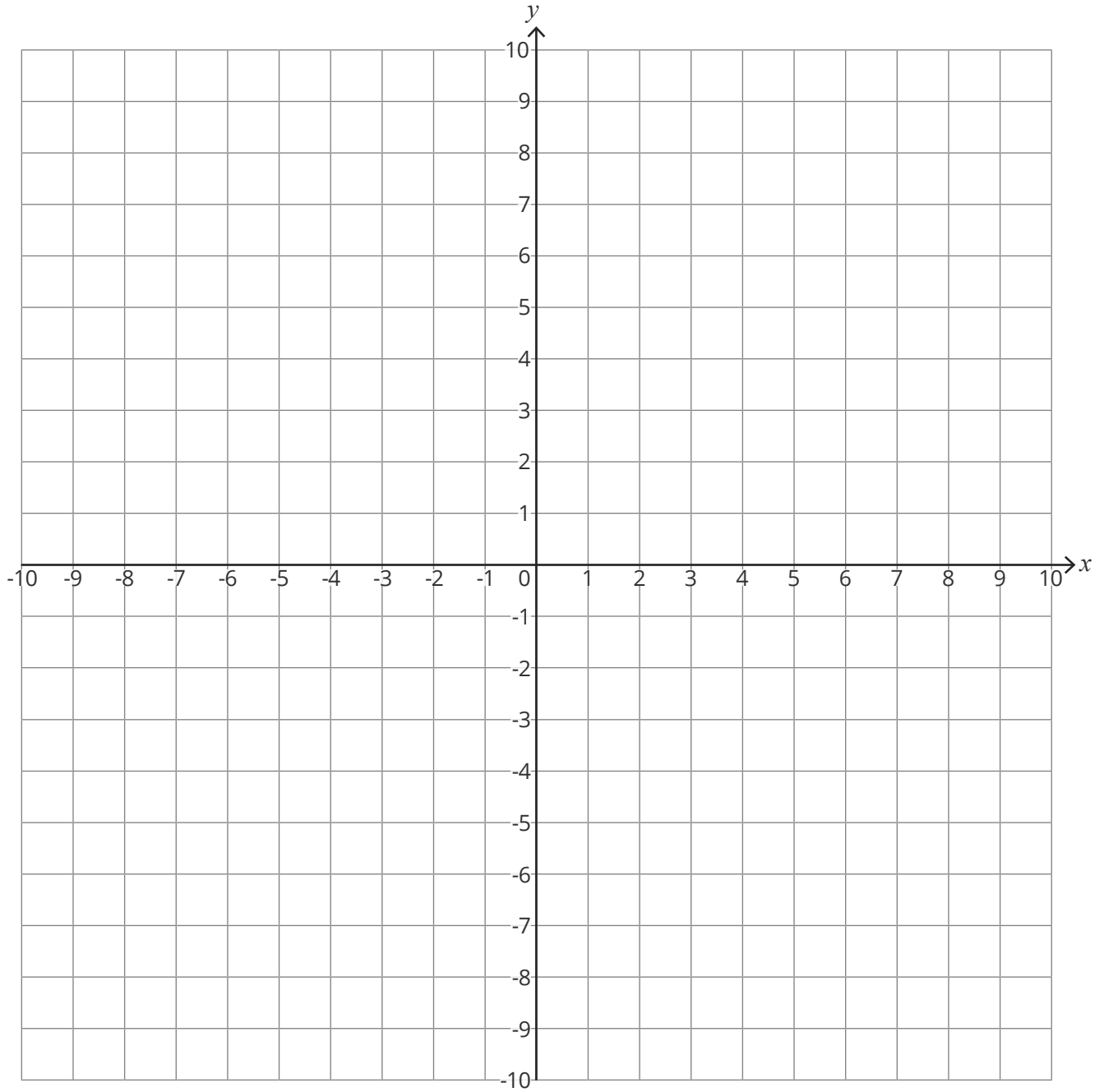
G \_\_\_\_\_

N \_\_\_\_\_

U \_\_\_\_\_



2. Plot each of the following coordinates and label them with the correct letter.



A (2, -2)

H (4, 10)

O (8, 1)

V (3, 3)

B (-3, -4)

I (5, -4)

P (8, 9)

W (3, -10)

C (-6, -10)

J (-6, -2)

Q (8, -4)

X (0, -7)

D (3, -7)

K (3, 0)

R (-5, 9)

Y (-2, 2)

E (6, 6)

L (-6, 4)

S (0, 5)

Z (6, -1)

F (-2, 9)

M (-2, -9)

T (-7, -6)

G (-4, 6)

N (8, -10)

U (-2, -2)



### Challenge

Point A is marked on the grid. Mark the two points on the grid that have an  $x$ -coordinate that is equal to 4, and a  $y$ -coordinate that is greater than 4.

