Rectangular Coordinate System

Jonathan R. Bacolod

Sauyo High School

What is a Rectangular Coordinate System?

Rectangular Coordinate System:

What is a Rectangular Coordinate System?

Rectangular Coordinate System:

- also called *Cartesian Plane*, named after Rene Descartes

What is a Rectangular Coordinate System?

Rectangular Coordinate System:

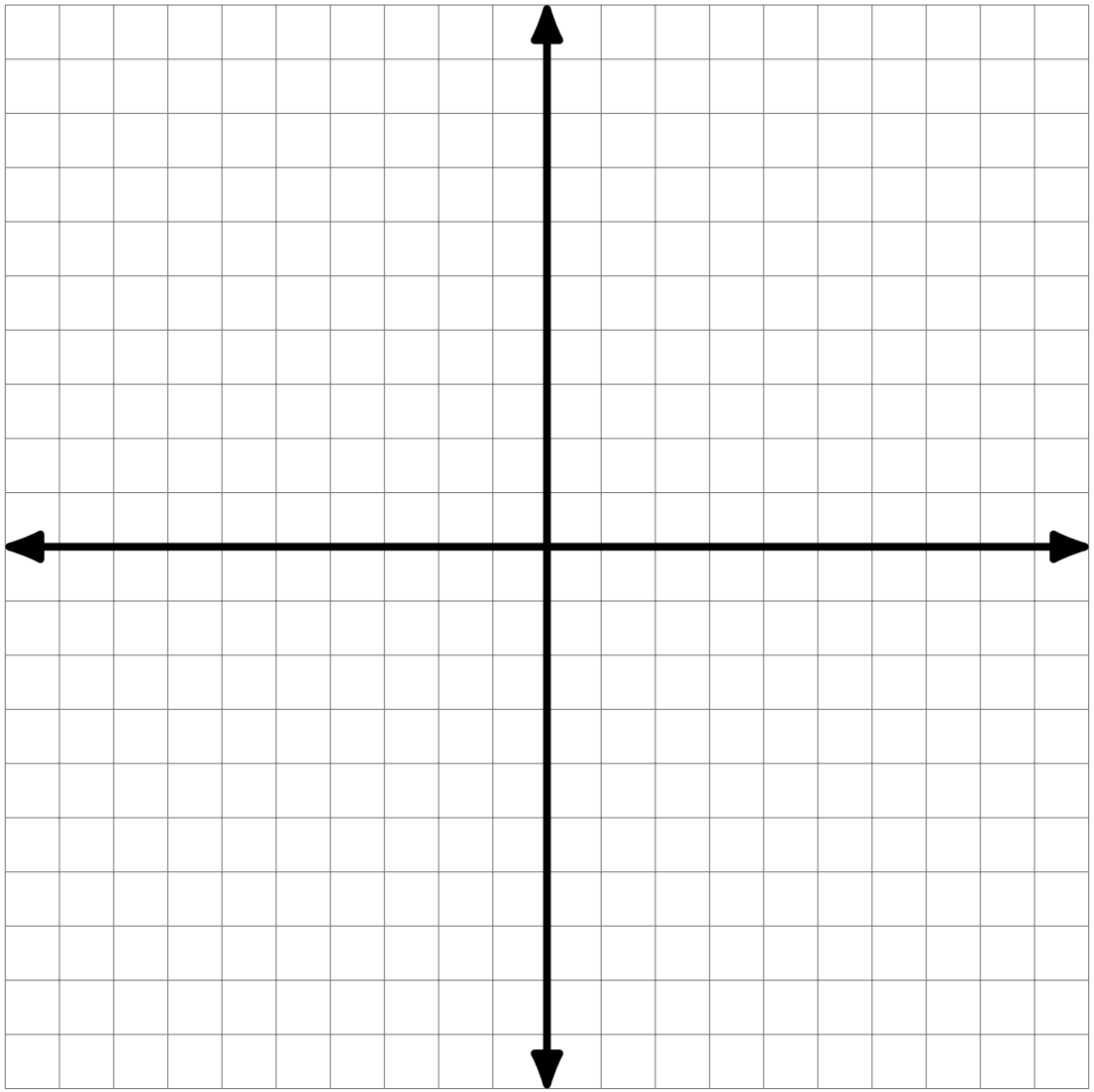
- also called *Cartesian Plane*, named after Rene Descartes
- is a system for graphing number pairs

What is a Rectangular Coordinate System?

Rectangular Coordinate System:

- also called *Cartesian Plane*, named after Rene Descartes
- is a system for graphing number pairs
- constructed by drawing two perpendicular lines which divide the plane into four regions

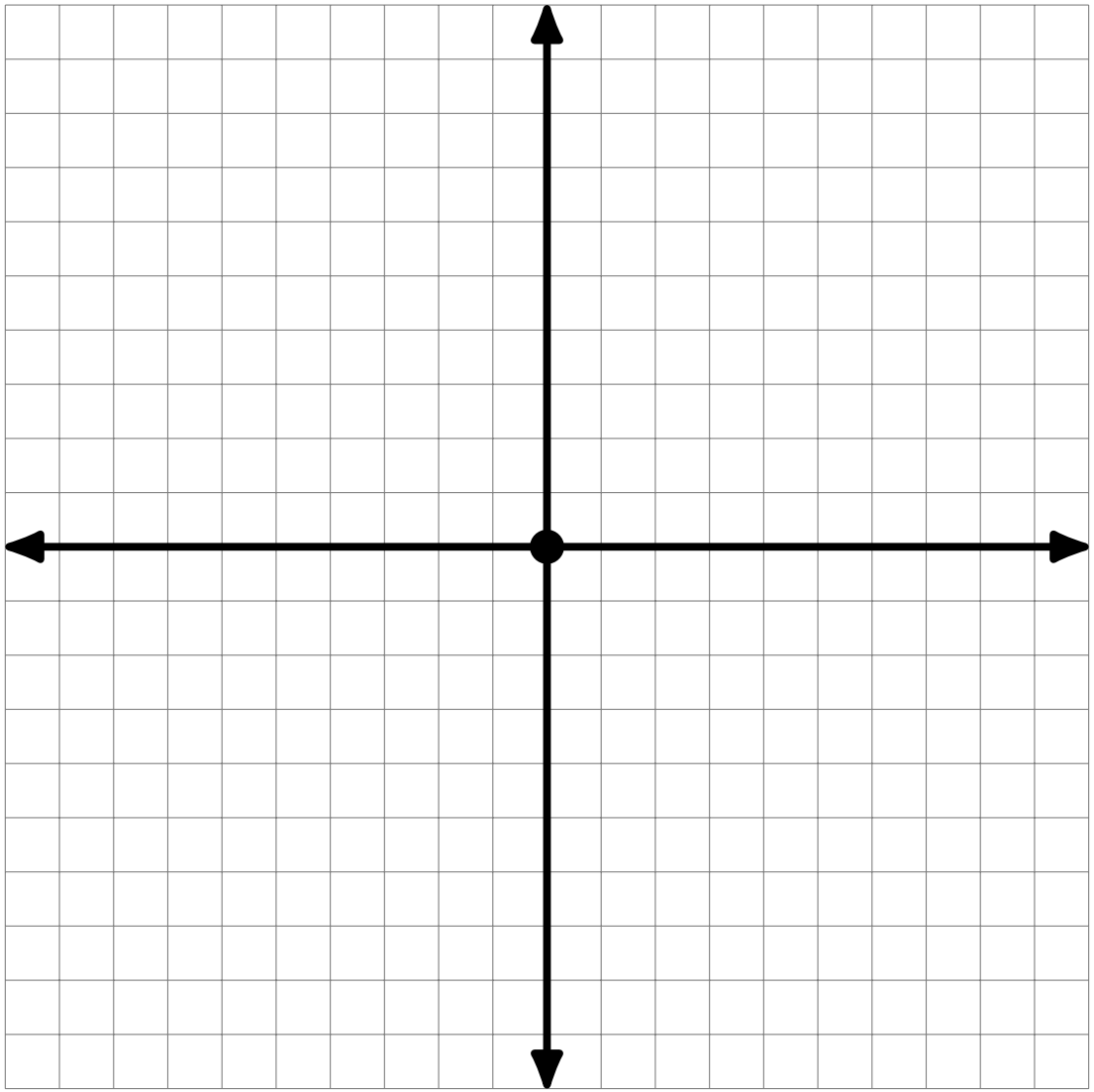
What is a Rectangular Coordinate System?



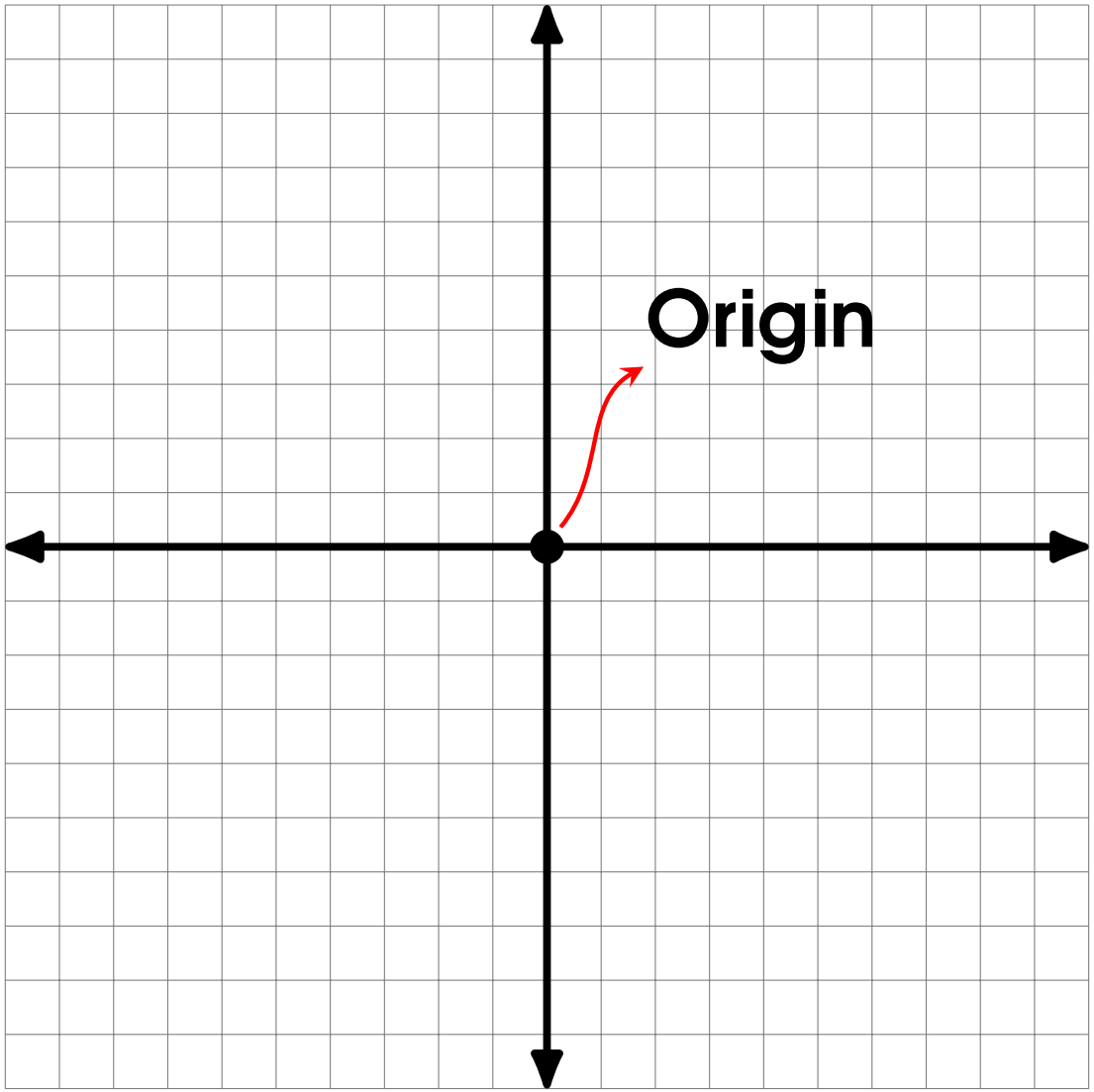
What are the Parts of the Rectangular Coordinate System?

- Origin: the point of intersection of the two perpendicular lines

What are the Parts of the Rectangular Coordinate System?



What are the Parts of the Rectangular Coordinate System?



What are the Parts of the Rectangular Coordinate System?

- Origin: the point of intersection of the two perpendicular lines
- Coordinate Axes: the two perpendicular lines

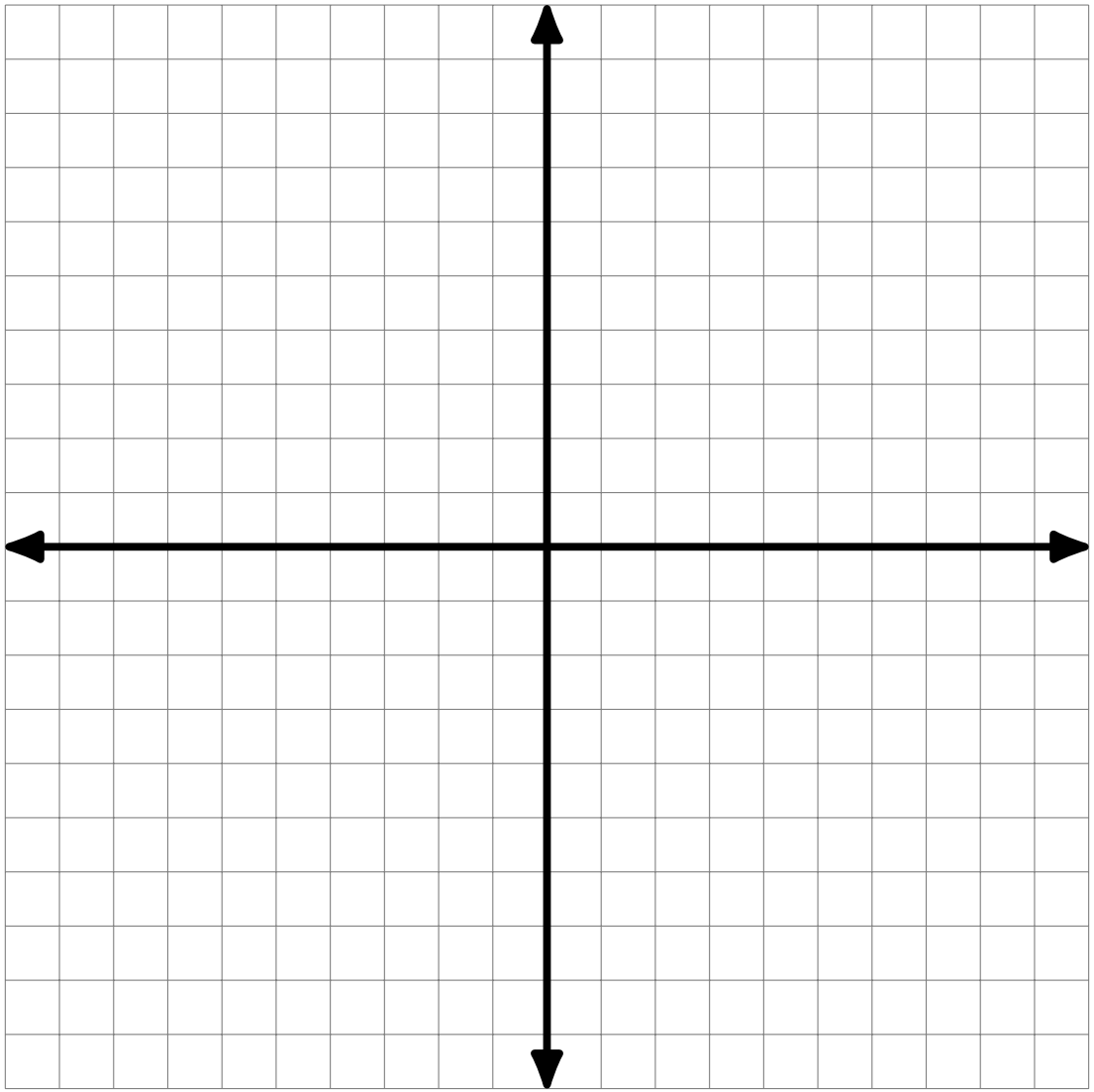
What are the Parts of the Rectangular Coordinate System?

- Origin: the point of intersection of the two perpendicular lines
- Coordinate Axes: the two perpendicular lines
  - X-Axis: the horizontal line

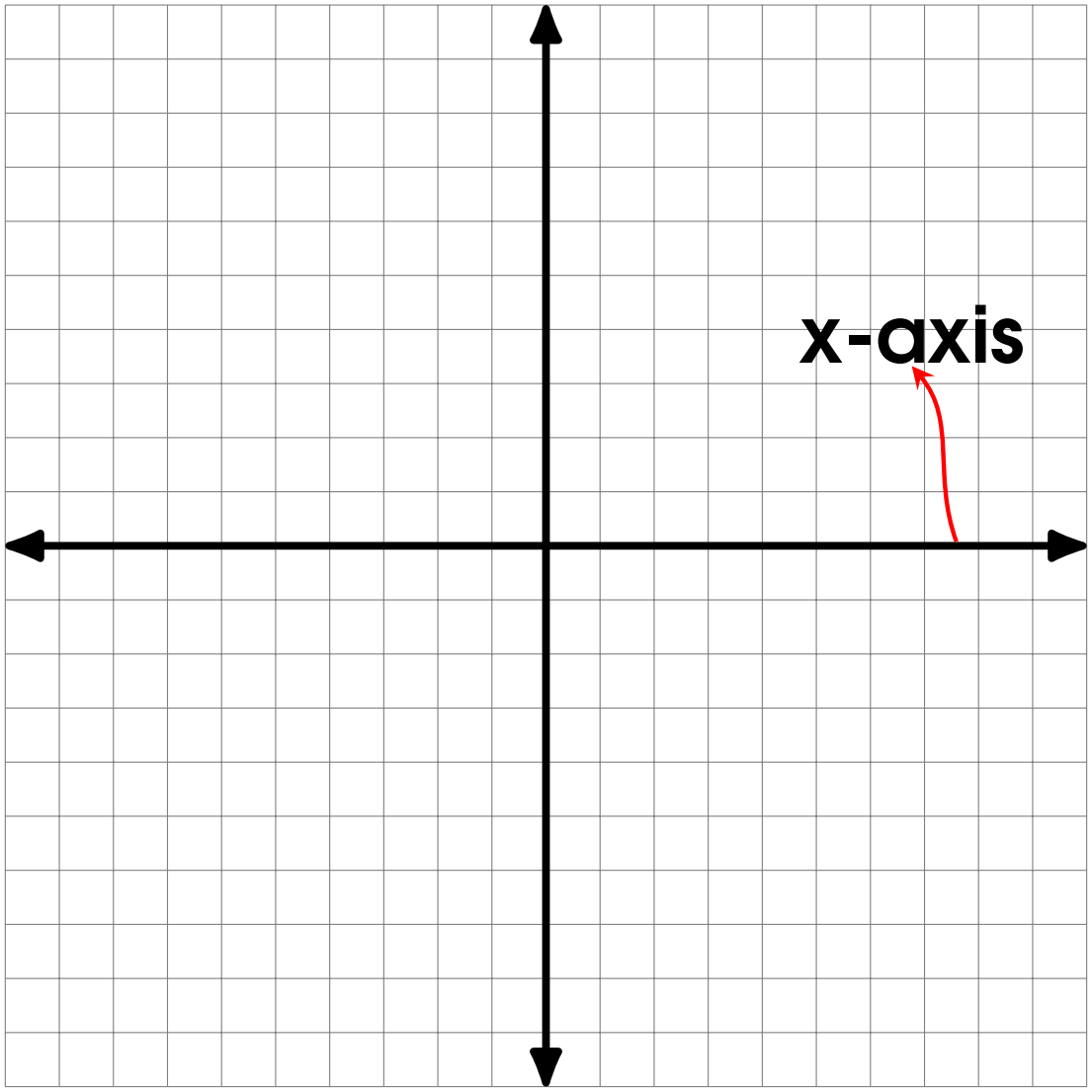
What are the Parts of the Rectangular Coordinate System?

- Origin: the point of intersection of the two perpendicular lines
- Coordinate Axes: the two perpendicular lines
  - X-Axis: the horizontal line
  - Y-Axis: the vertical line

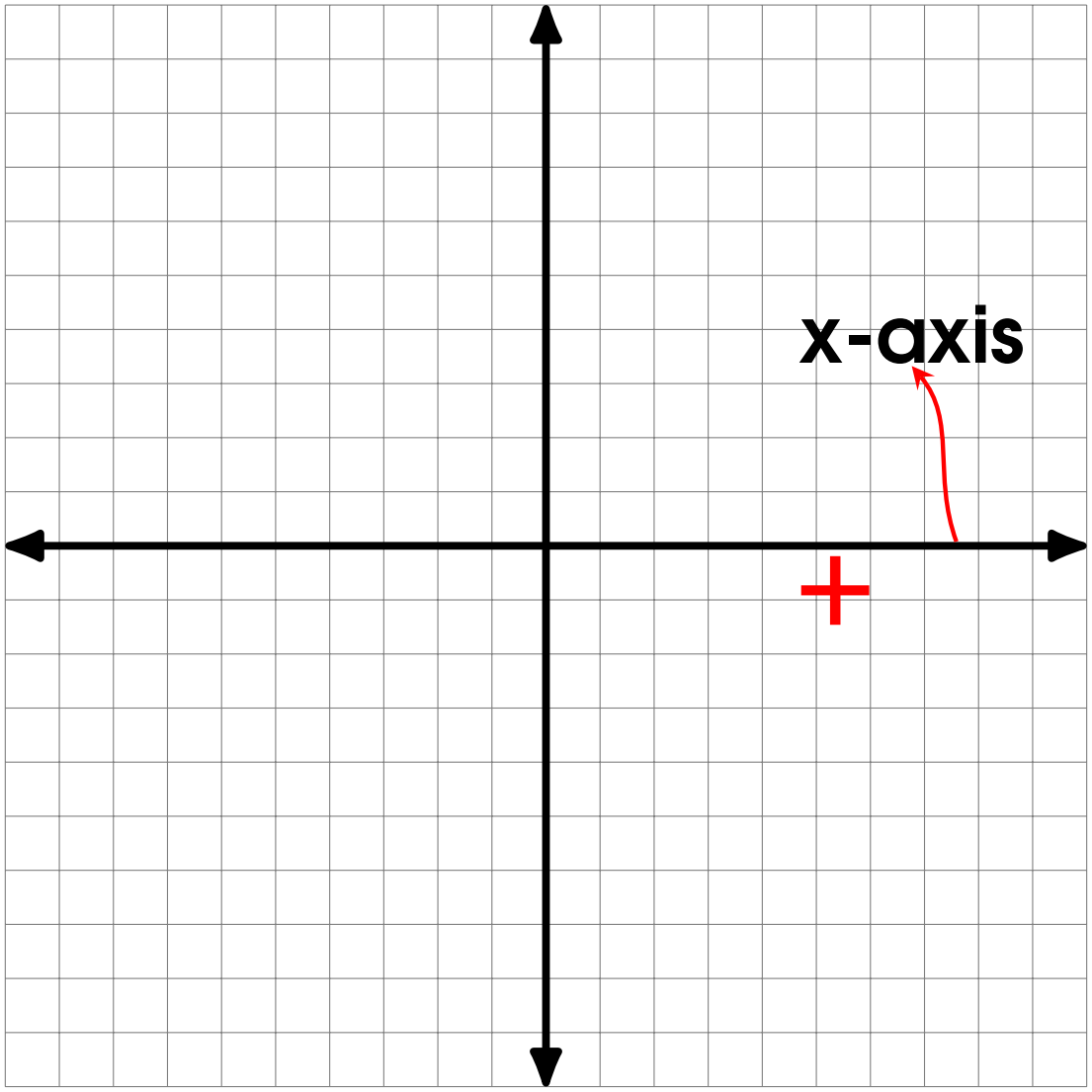
What are the Parts of the Rectangular Coordinate System?



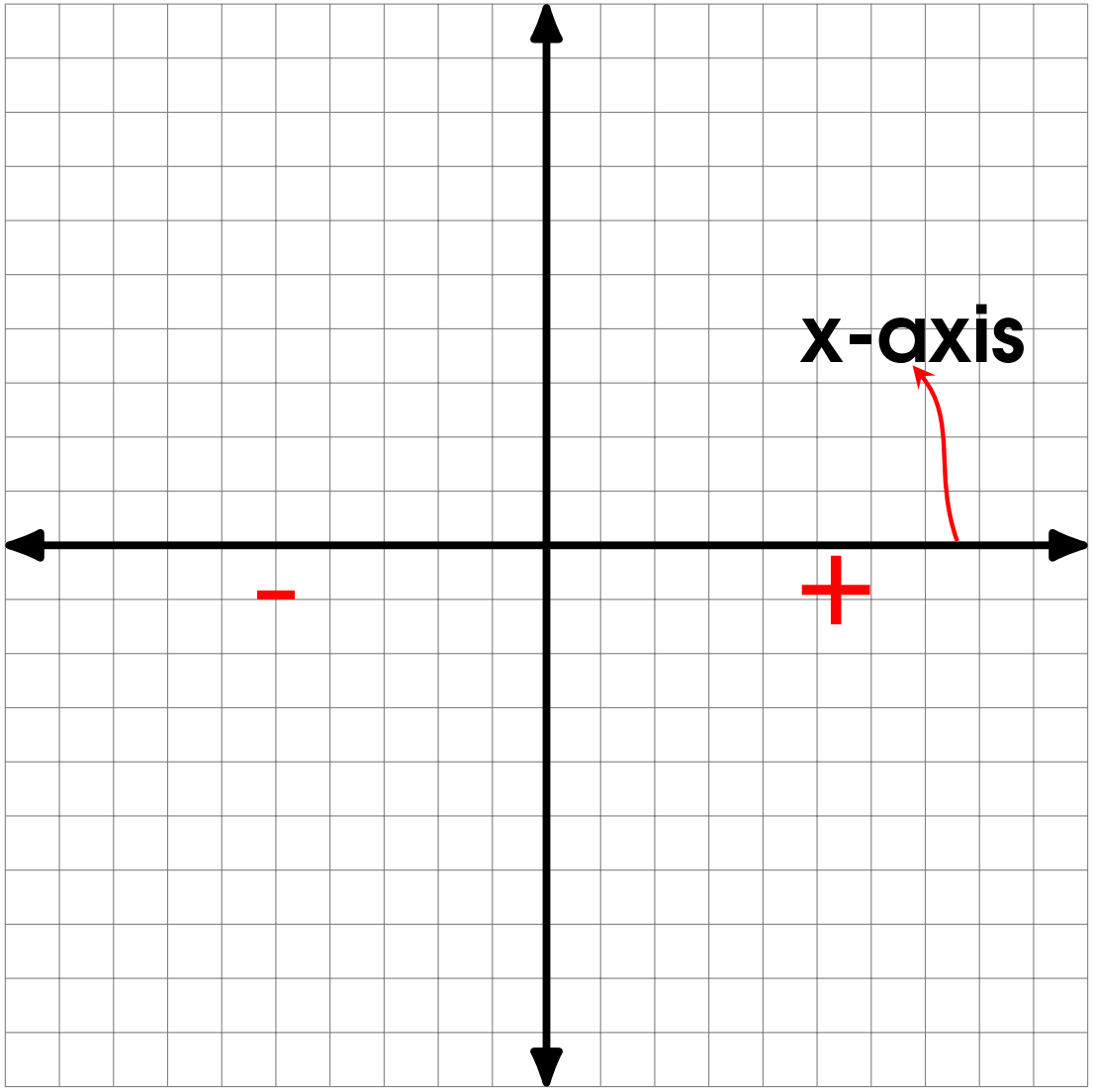
What are the Parts of the Rectangular Coordinate System?



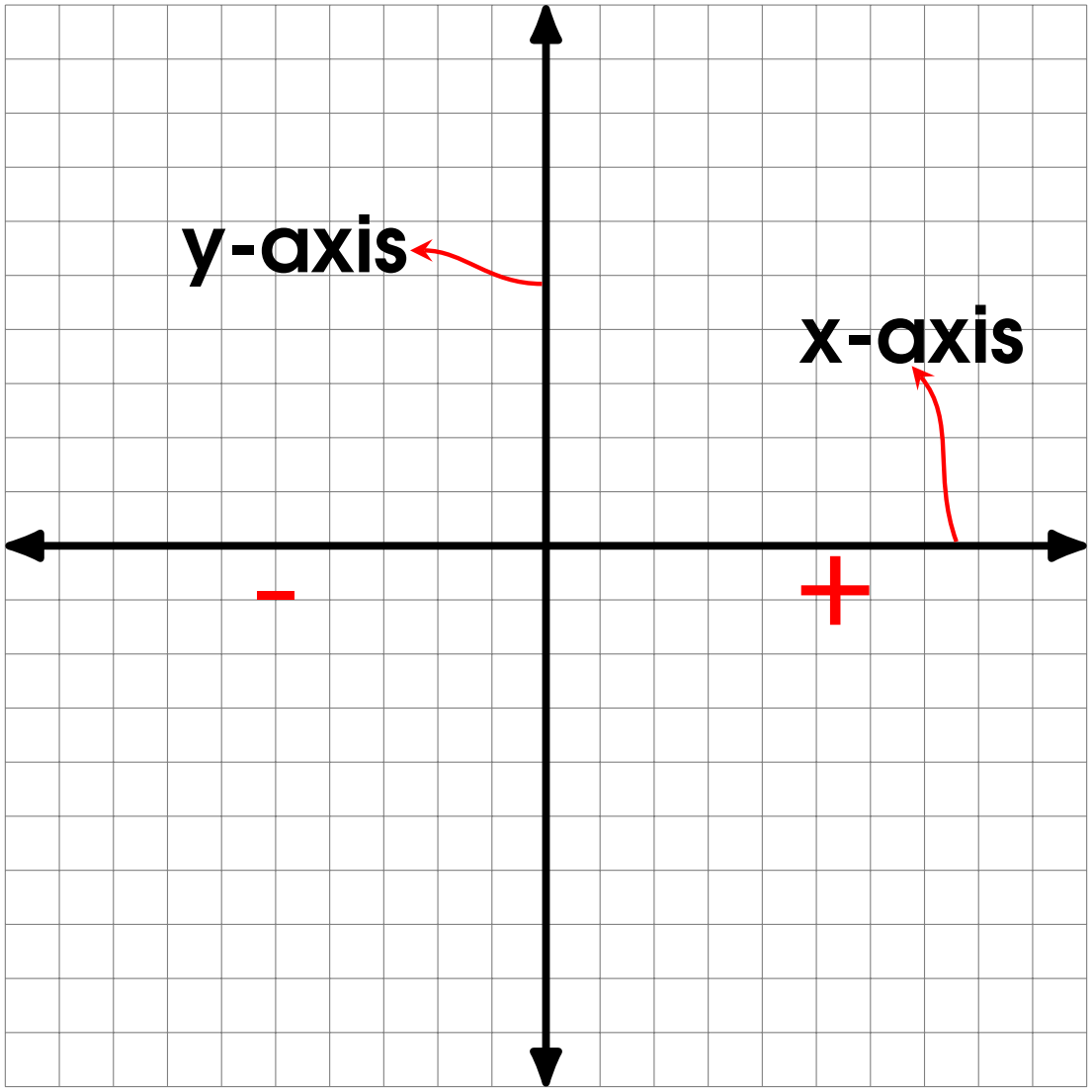
What are the Parts of the Rectangular Coordinate System?



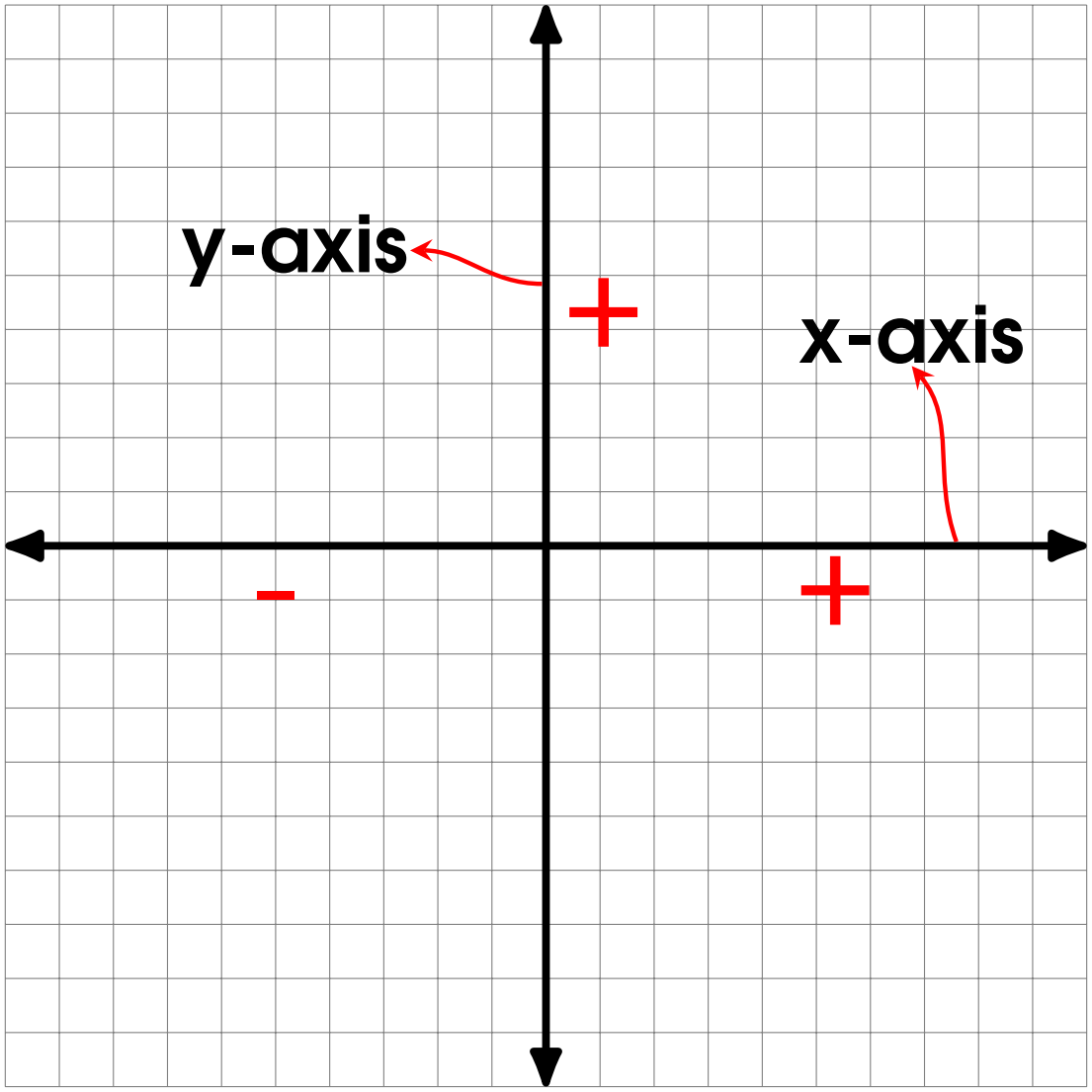
What are the Parts of the Rectangular Coordinate System?



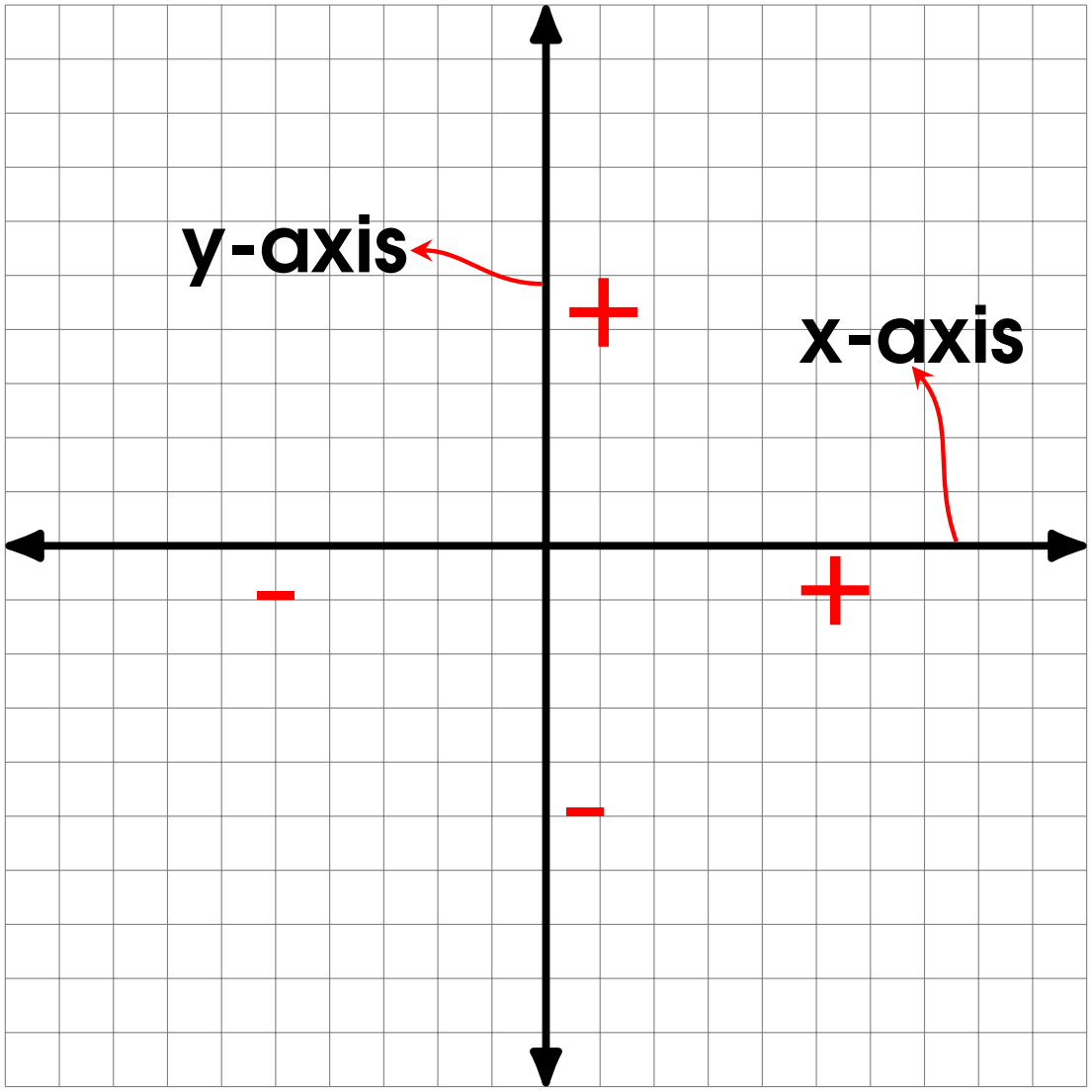
What are the Parts of the Rectangular Coordinate System?



What are the Parts of the Rectangular Coordinate System?



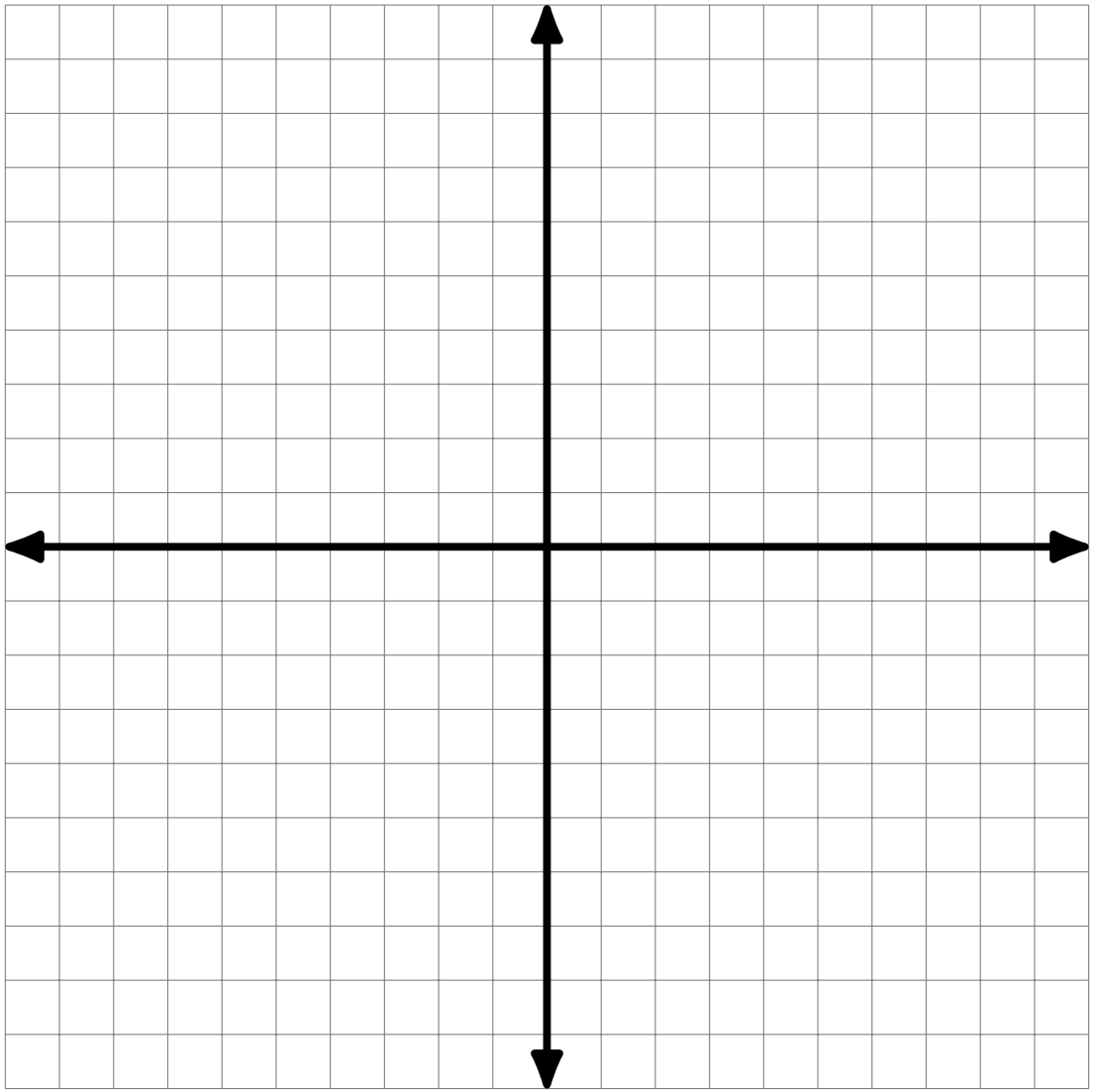
What are the Parts of the Rectangular Coordinate System?



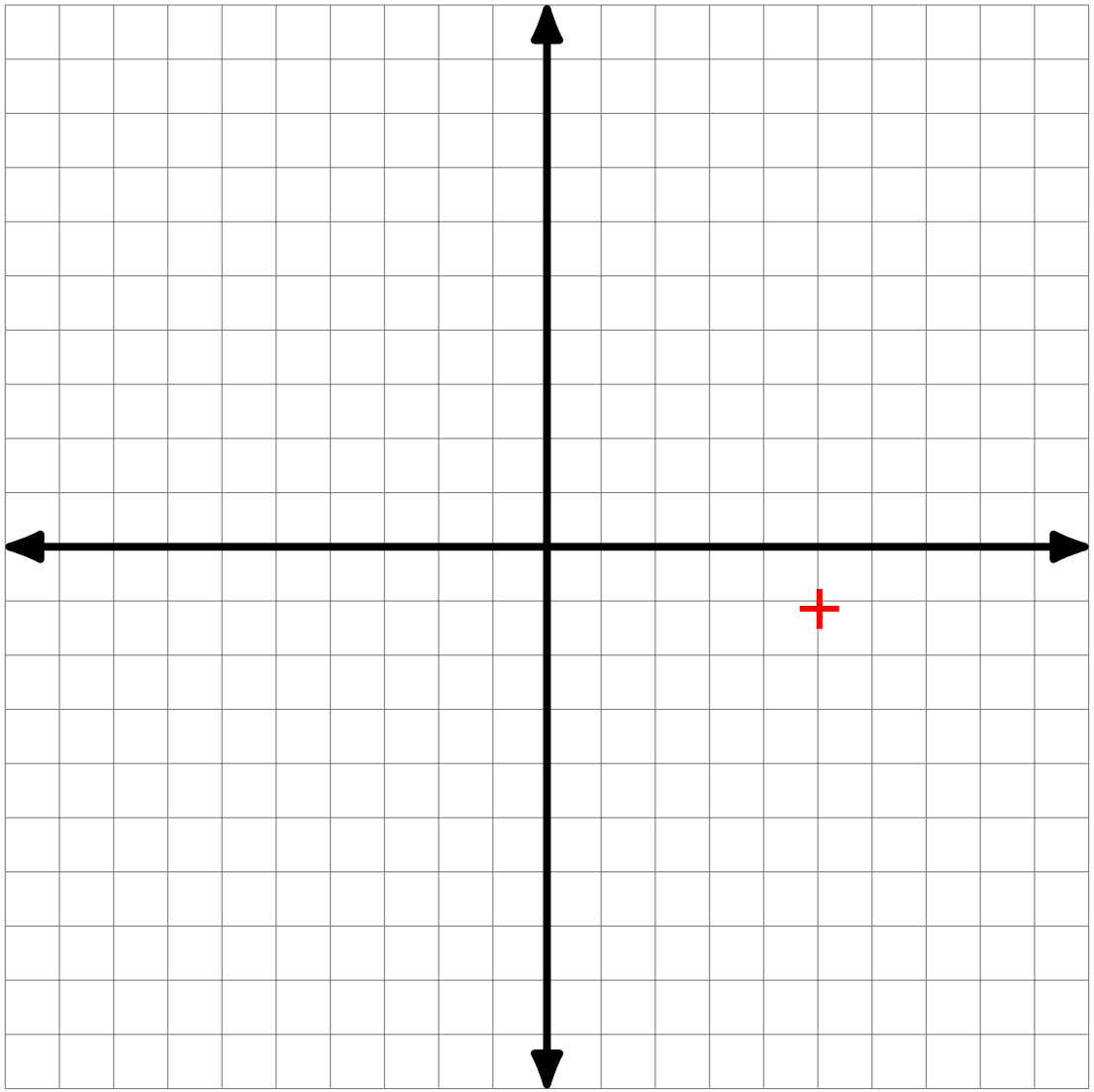
What are the Parts of the Rectangular Coordinate System?

- Origin: the point of intersection of the two perpendicular lines
- Coordinate Axes: the two perpendicular lines
  - X-Axis: the horizontal line
  - Y-Axis: the vertical line
- Quadrants: the four regions that divide the plane

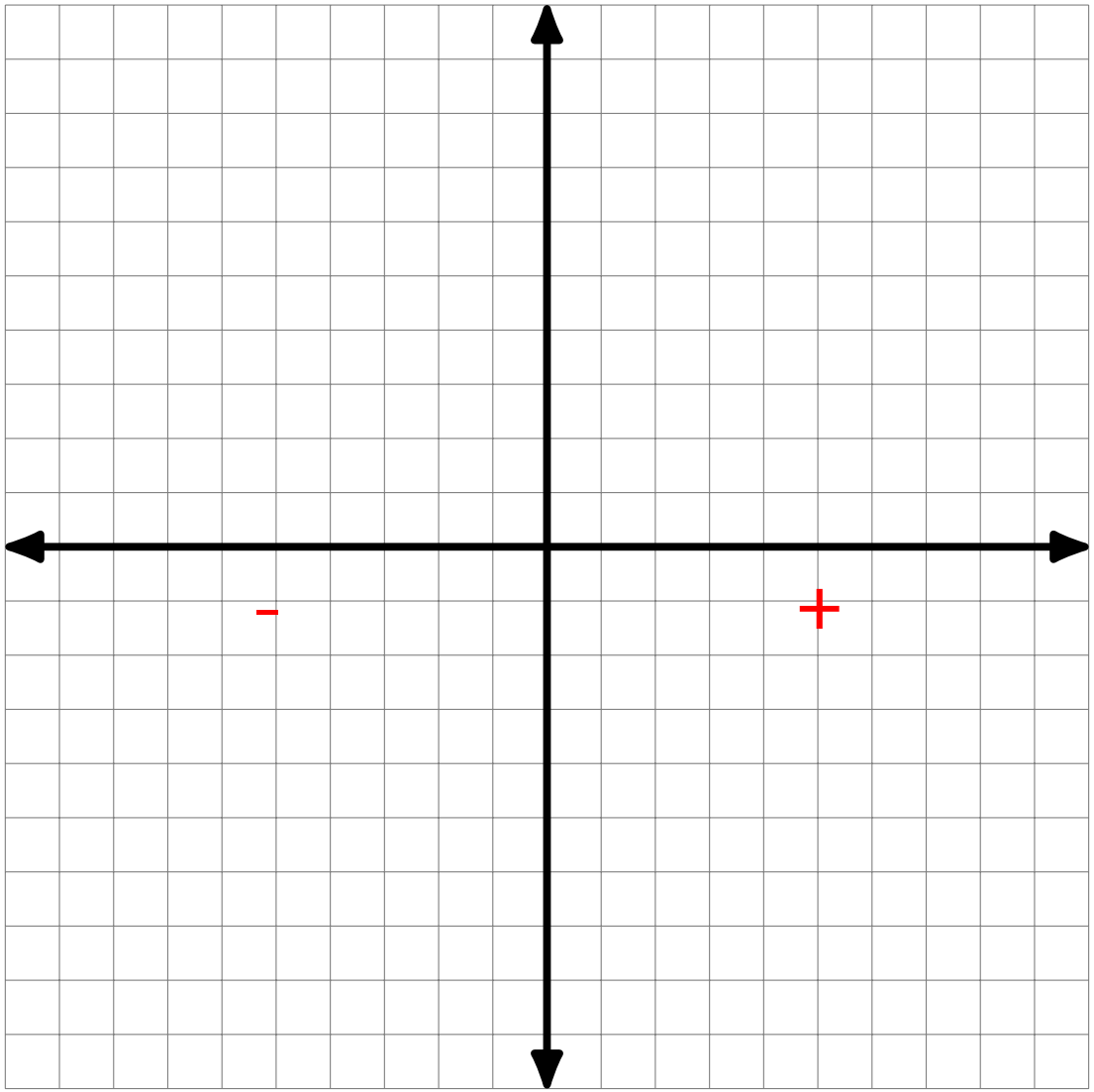
What are the Parts of the Rectangular Coordinate System?



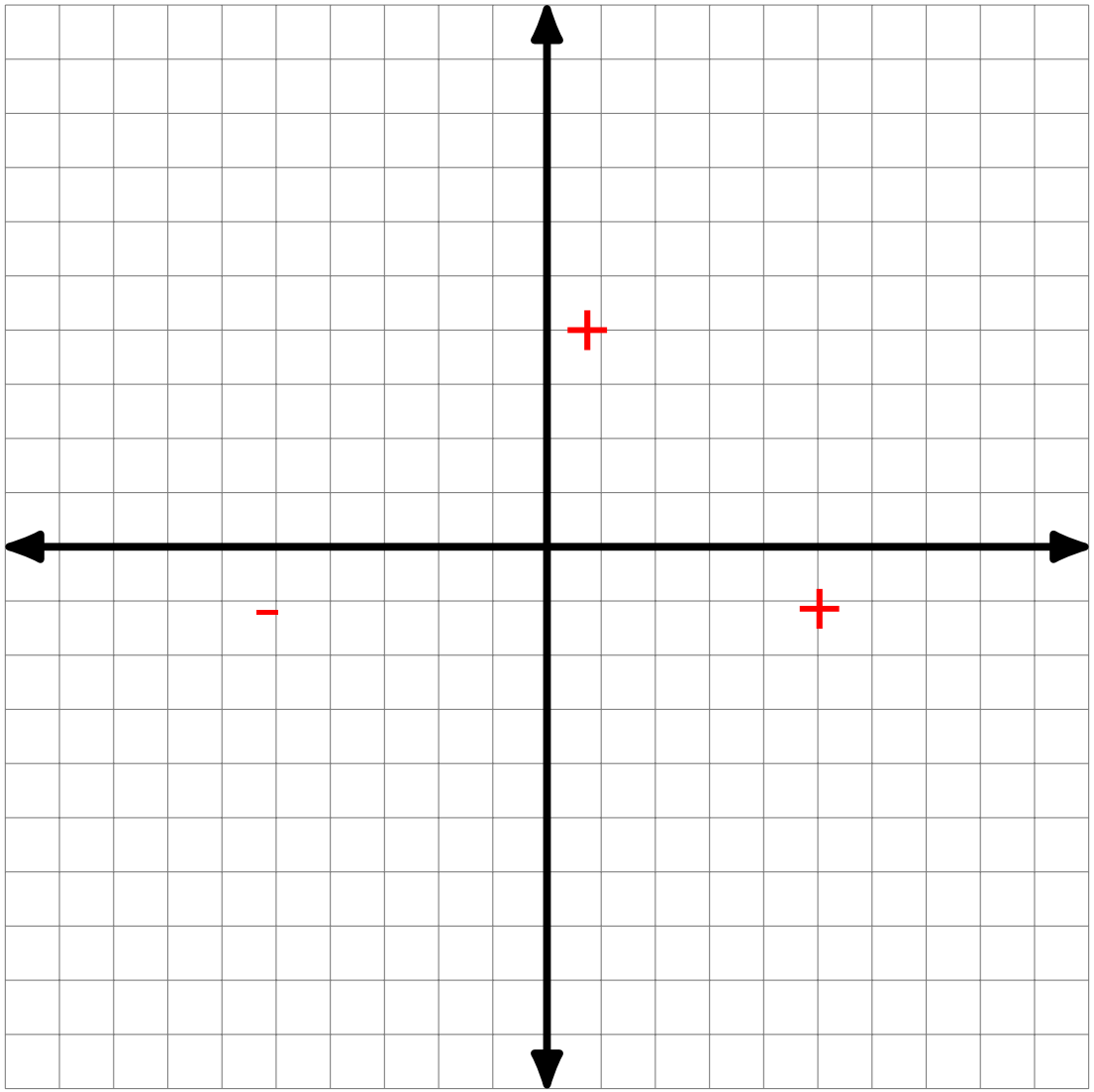
What are the Parts of the Rectangular Coordinate System?



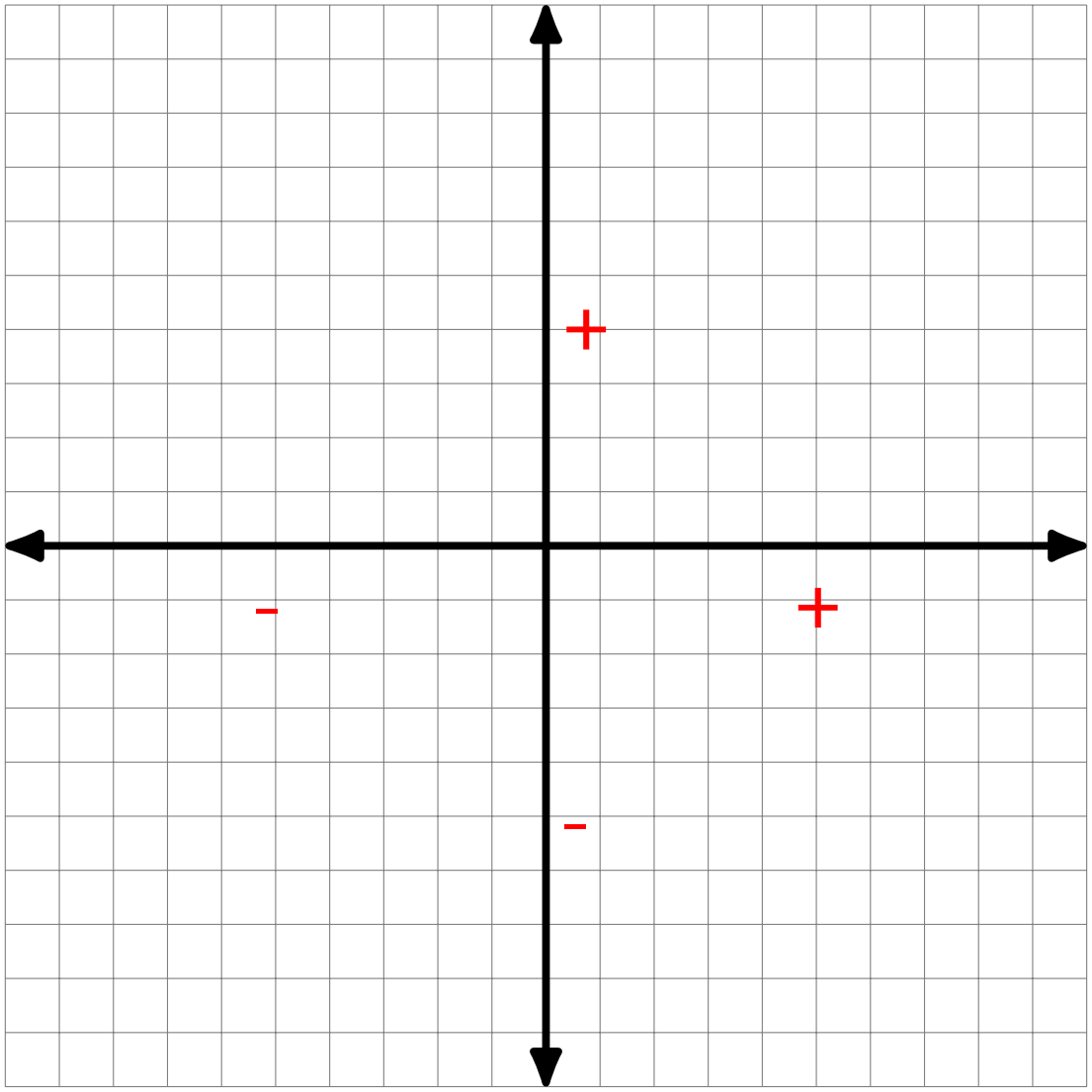
What are the Parts of the Rectangular Coordinate System?



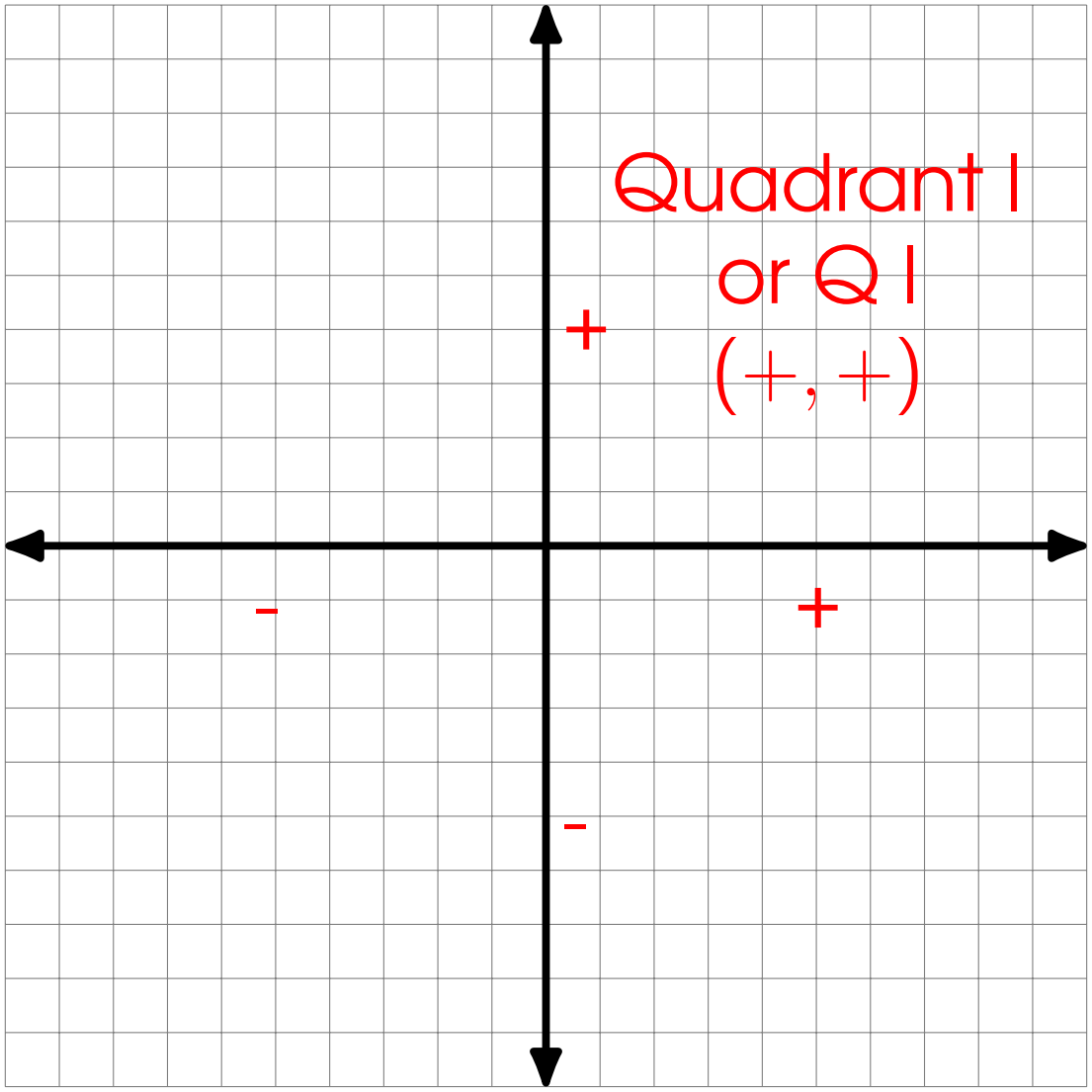
What are the Parts of the Rectangular Coordinate System?



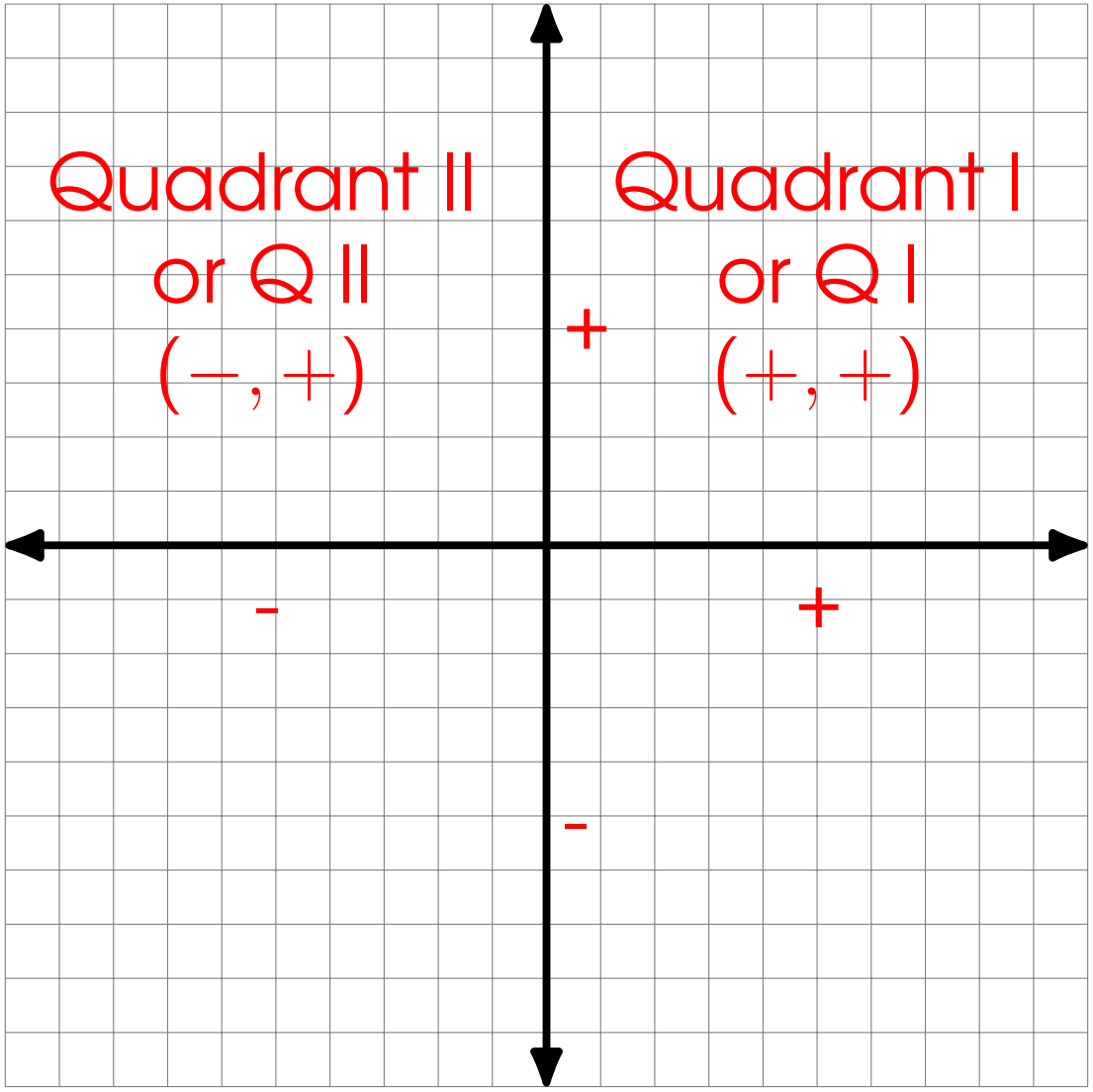
What are the Parts of the Rectangular Coordinate System?



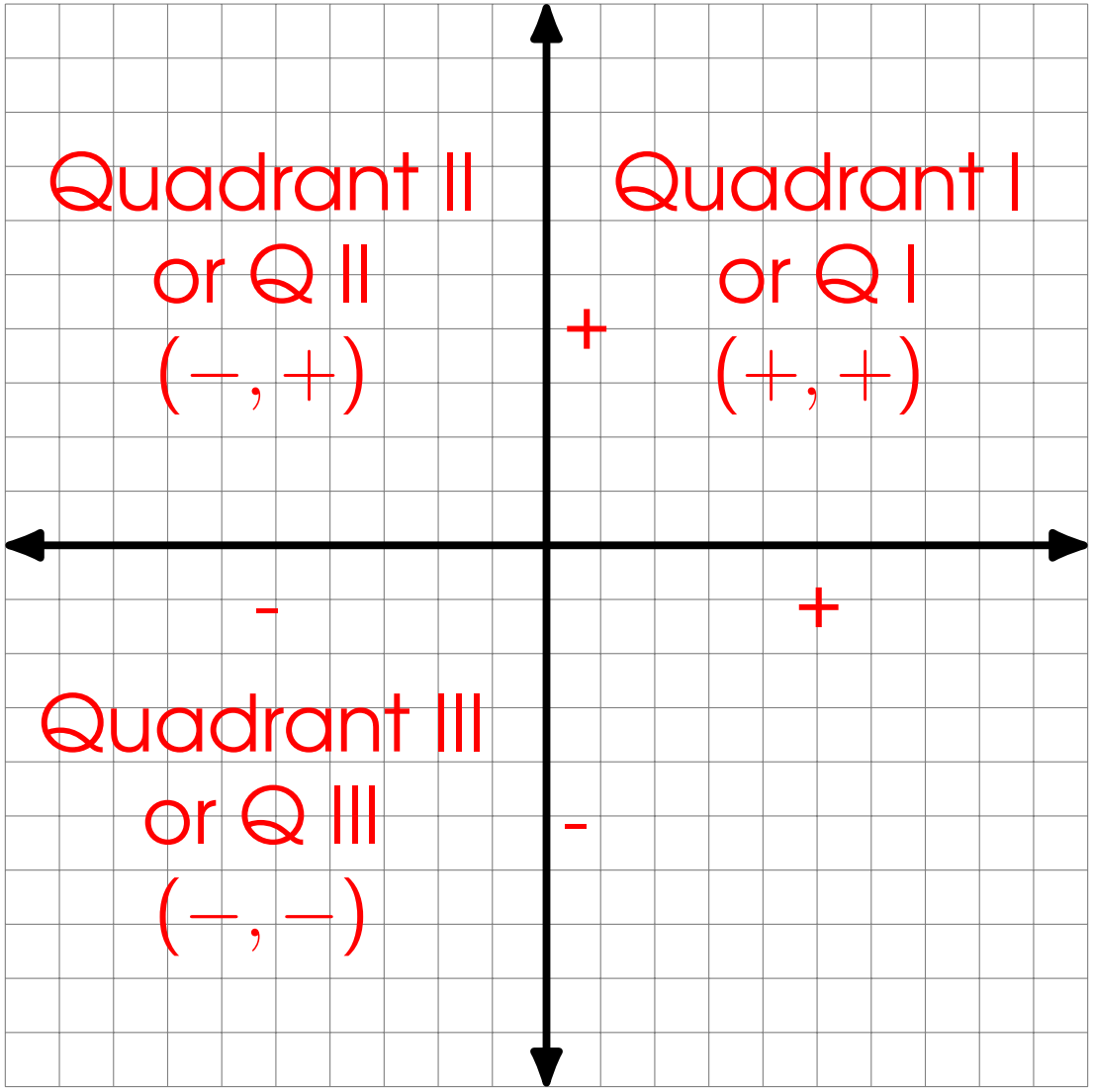
What are the Parts of the Rectangular Coordinate System?



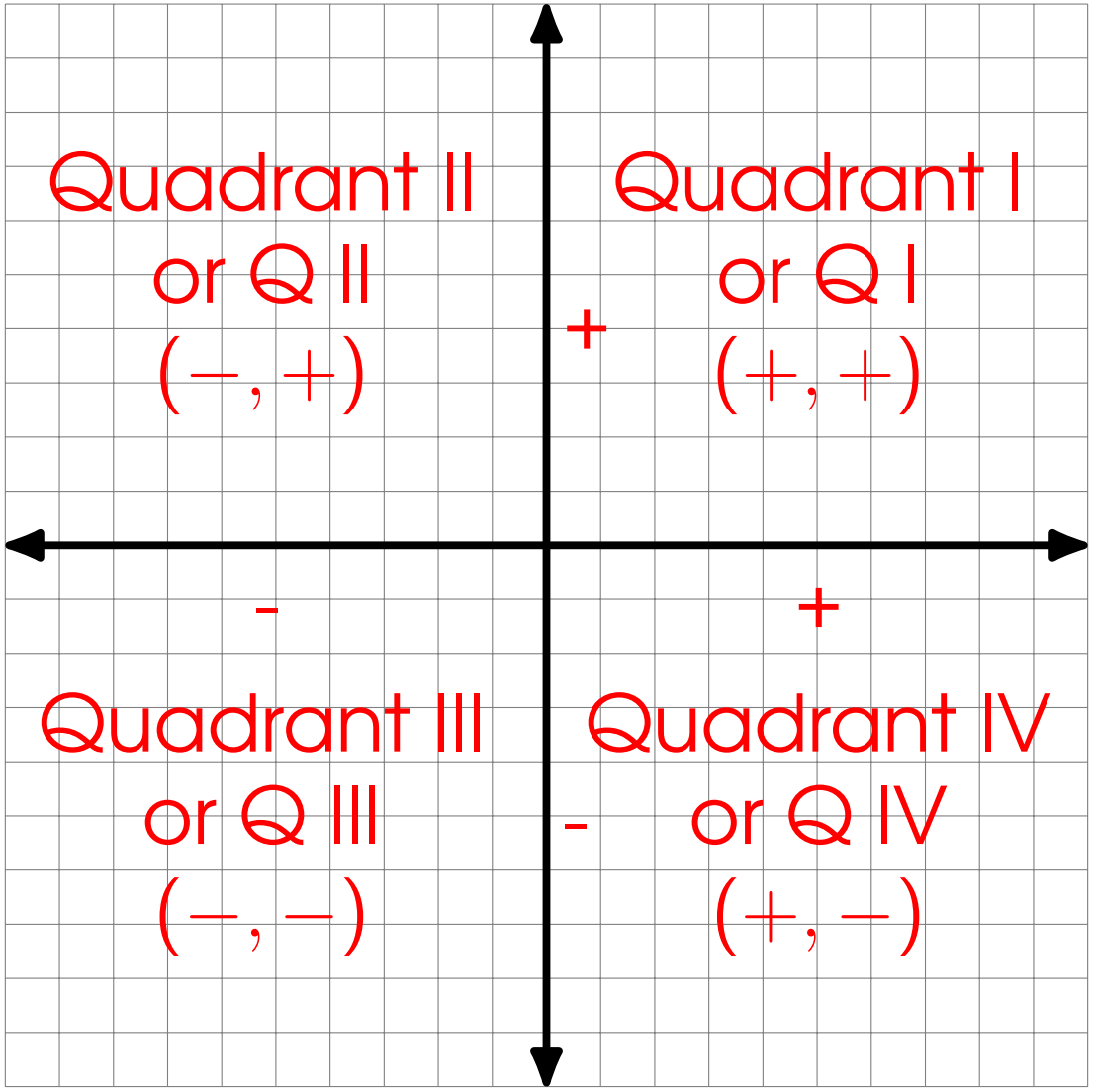
What are the Parts of the Rectangular Coordinate System?



What are the Parts of the Rectangular Coordinate System?



What are the Parts of the Rectangular Coordinate System?



What are the Parts of the Rectangular Coordinate System?

- Coordinates: the ordered pair of real numbers that corresponds to each point in the plane

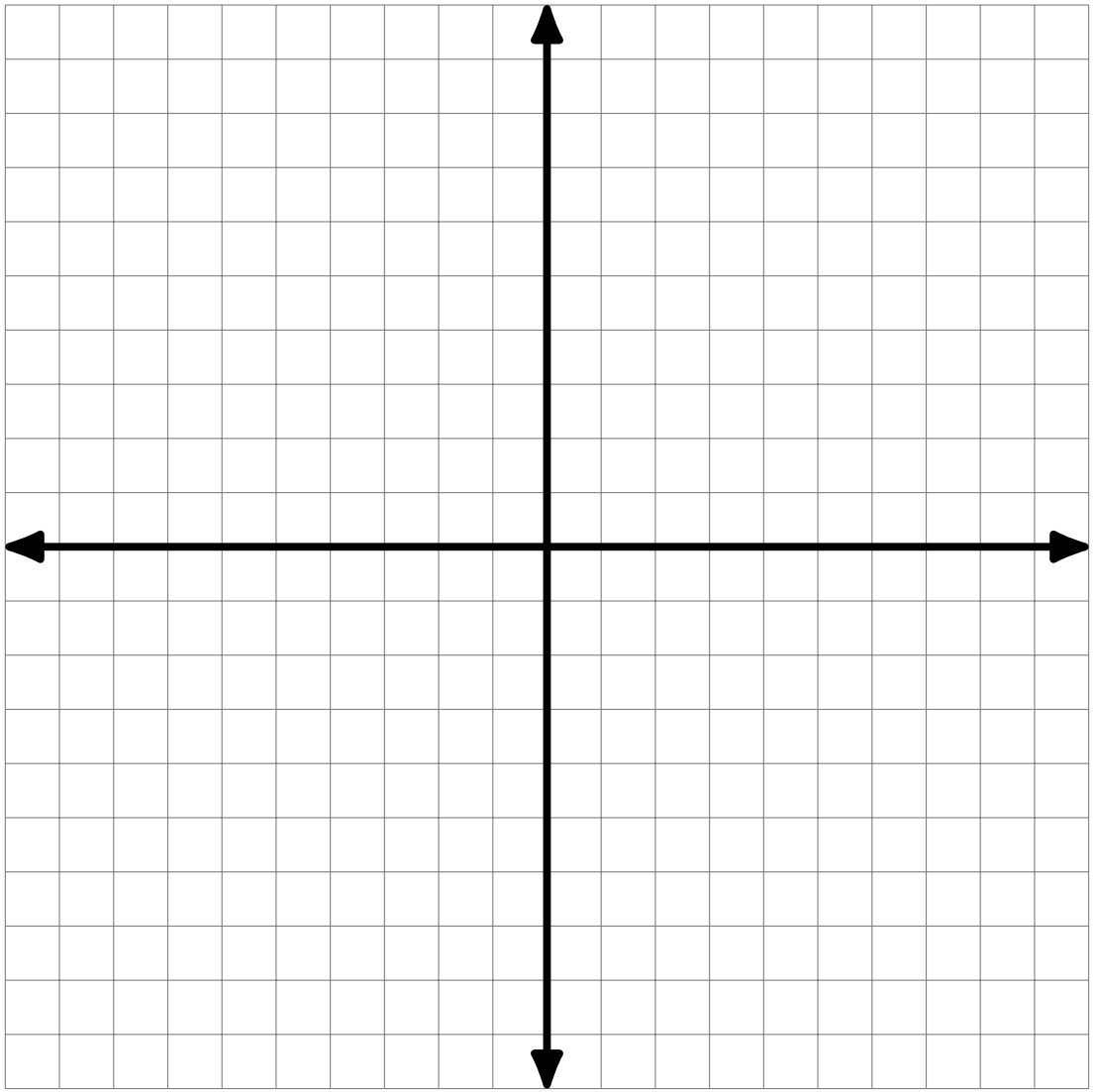
What are the Parts of the Rectangular Coordinate System?

- Coordinates: the ordered pair of real numbers that corresponds to each point in the plane
  - X-Coordinate or Abscissa: the first number of the ordered pair

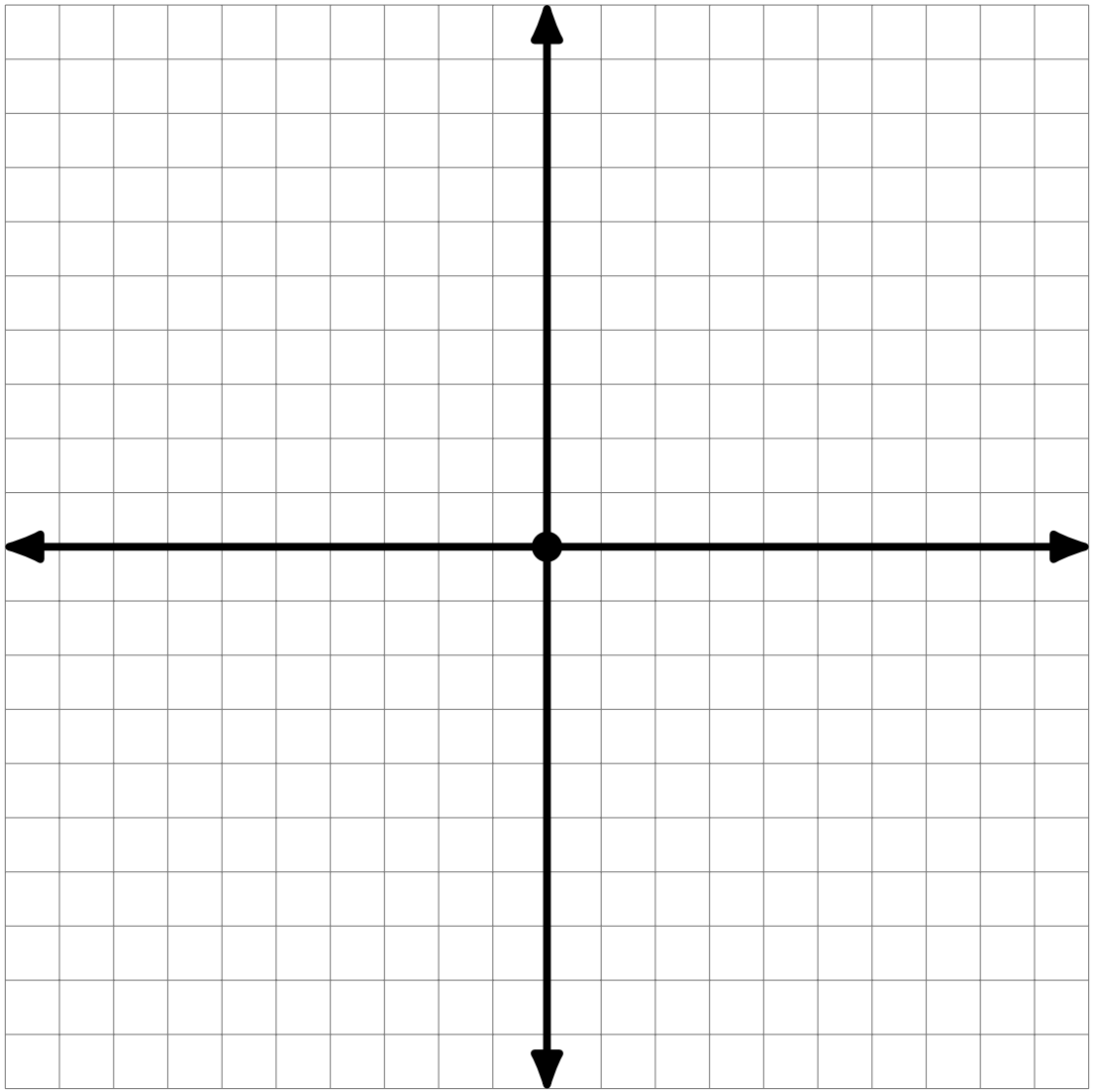
What are the Parts of the Rectangular Coordinate System?

- Coordinates: the ordered pair of real numbers that corresponds to each point in the plane
  - X-Coordinate or Abscissa: the first number of the ordered pair
  - Y-Coordinate or Ordinate: the second number of the ordered pair

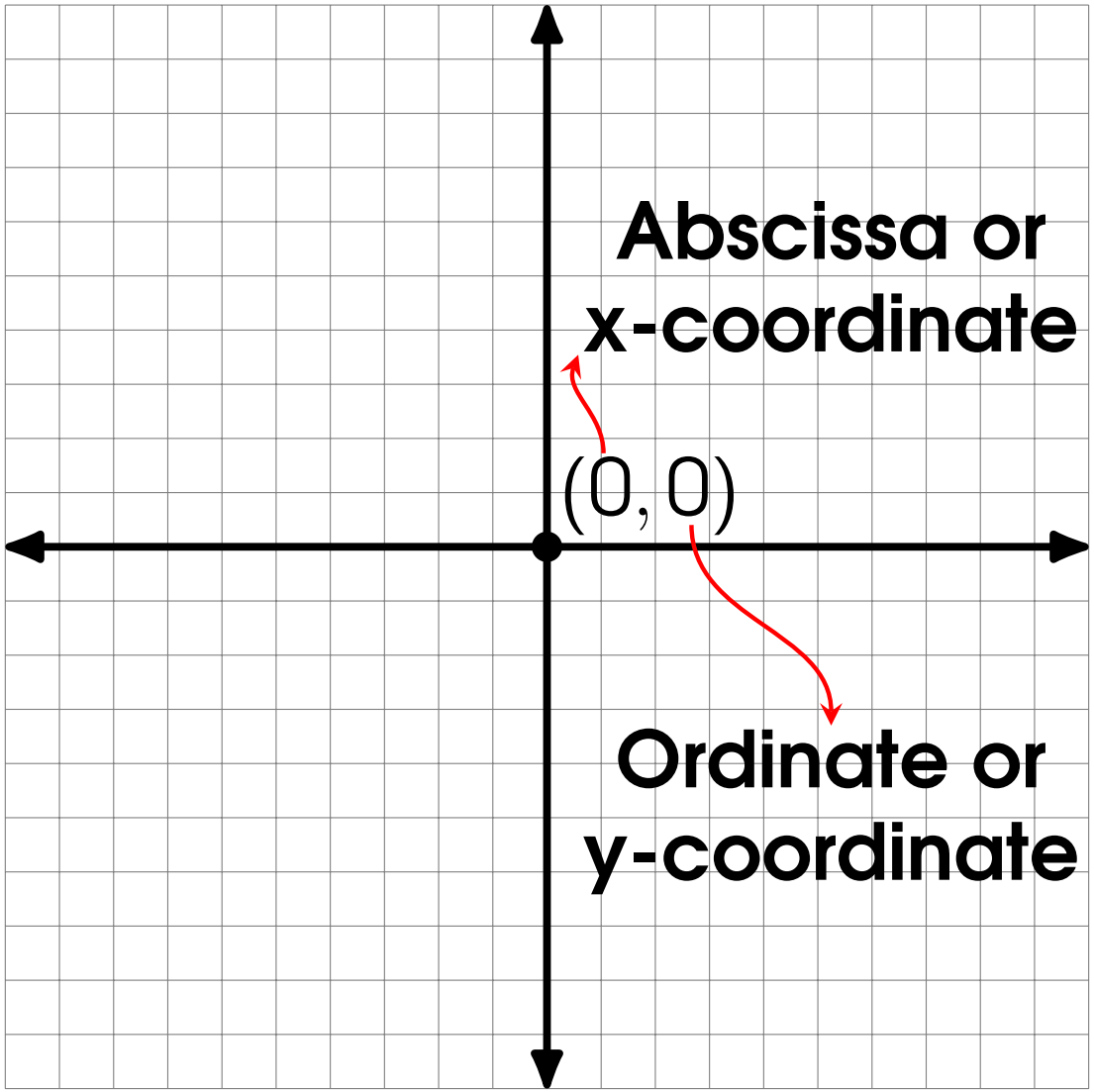
What are the Parts of the Rectangular Coordinate System?



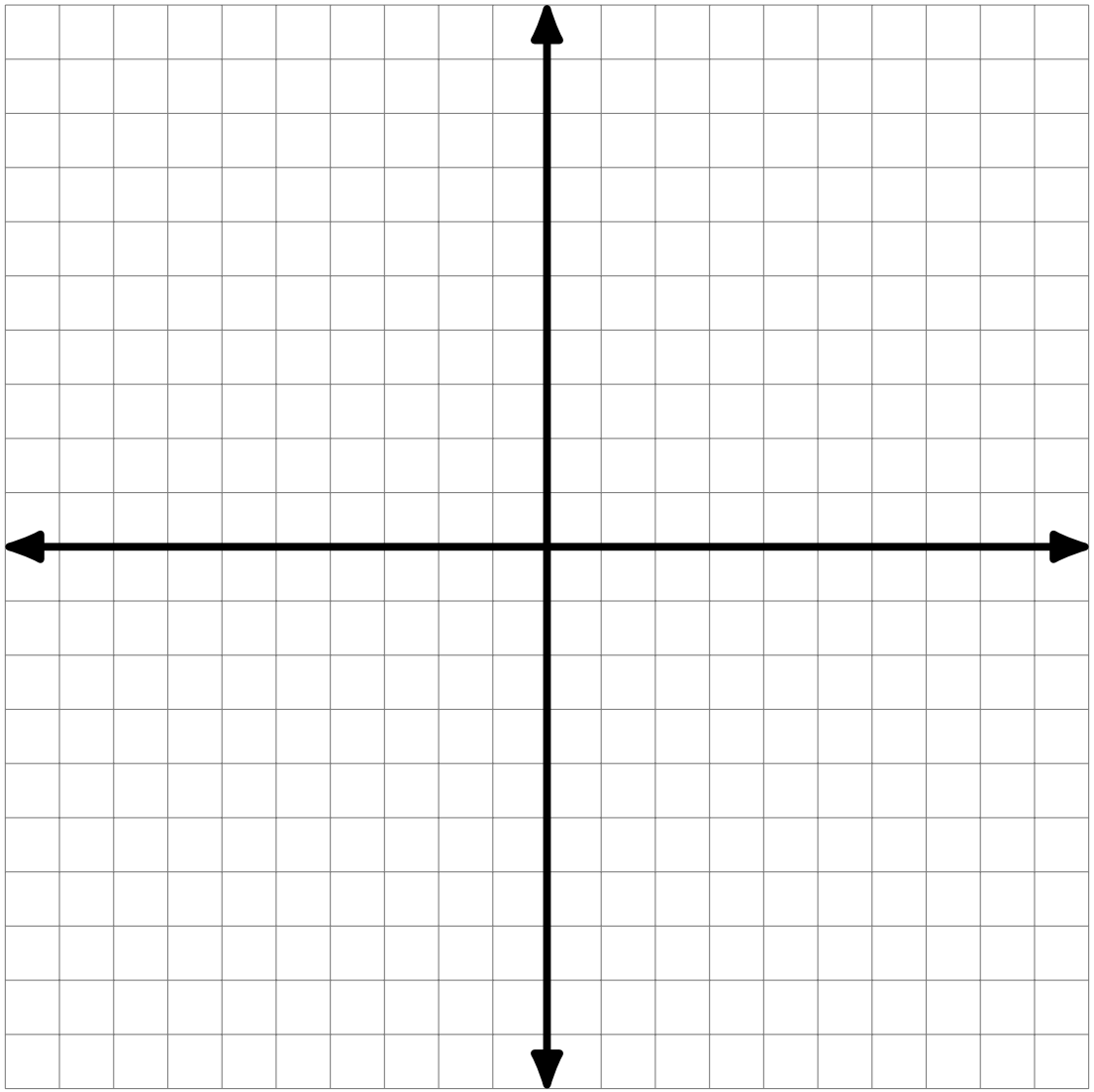
What are the Parts of the Rectangular Coordinate System?



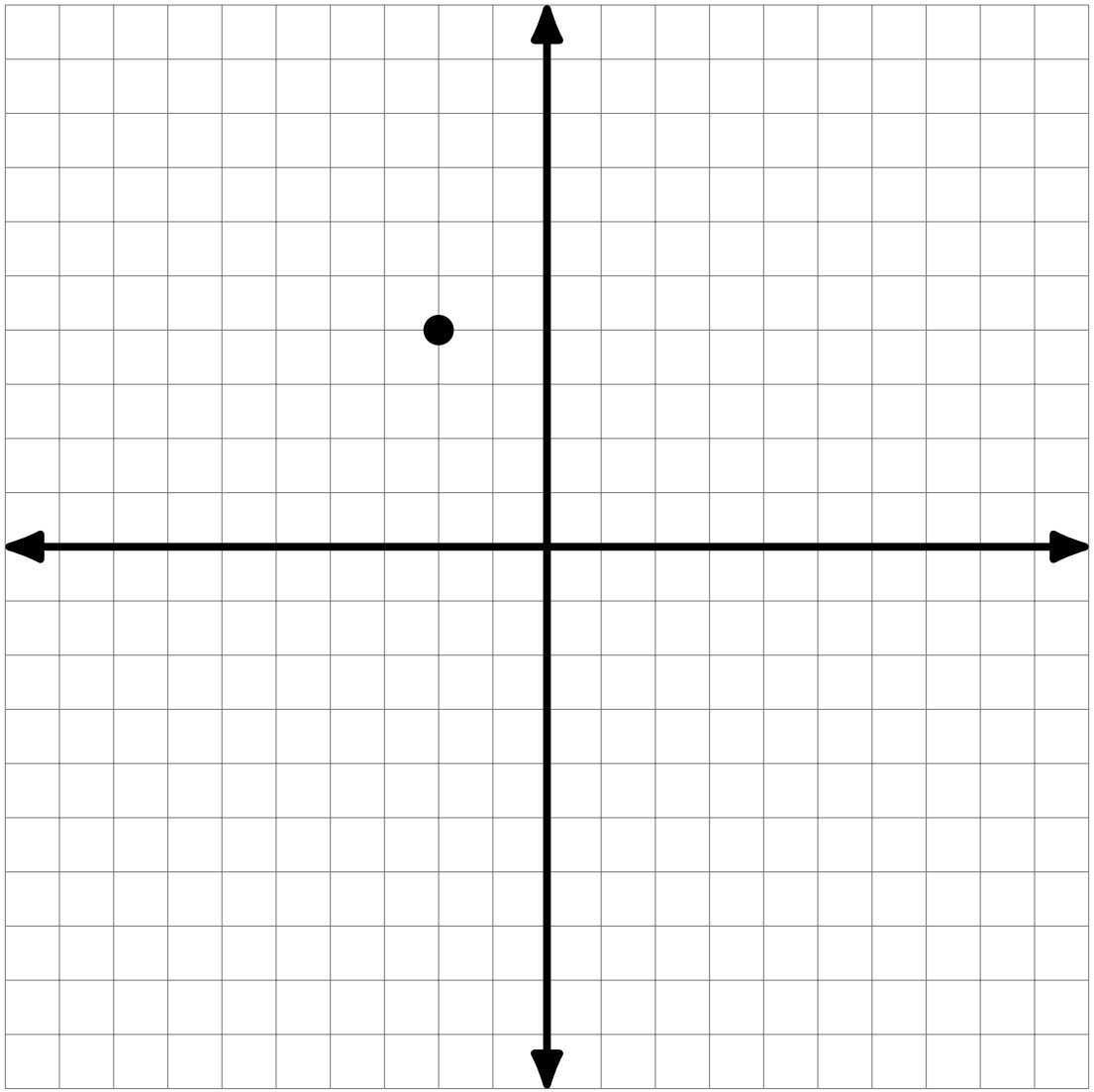
What are the Parts of the Rectangular Coordinate System?



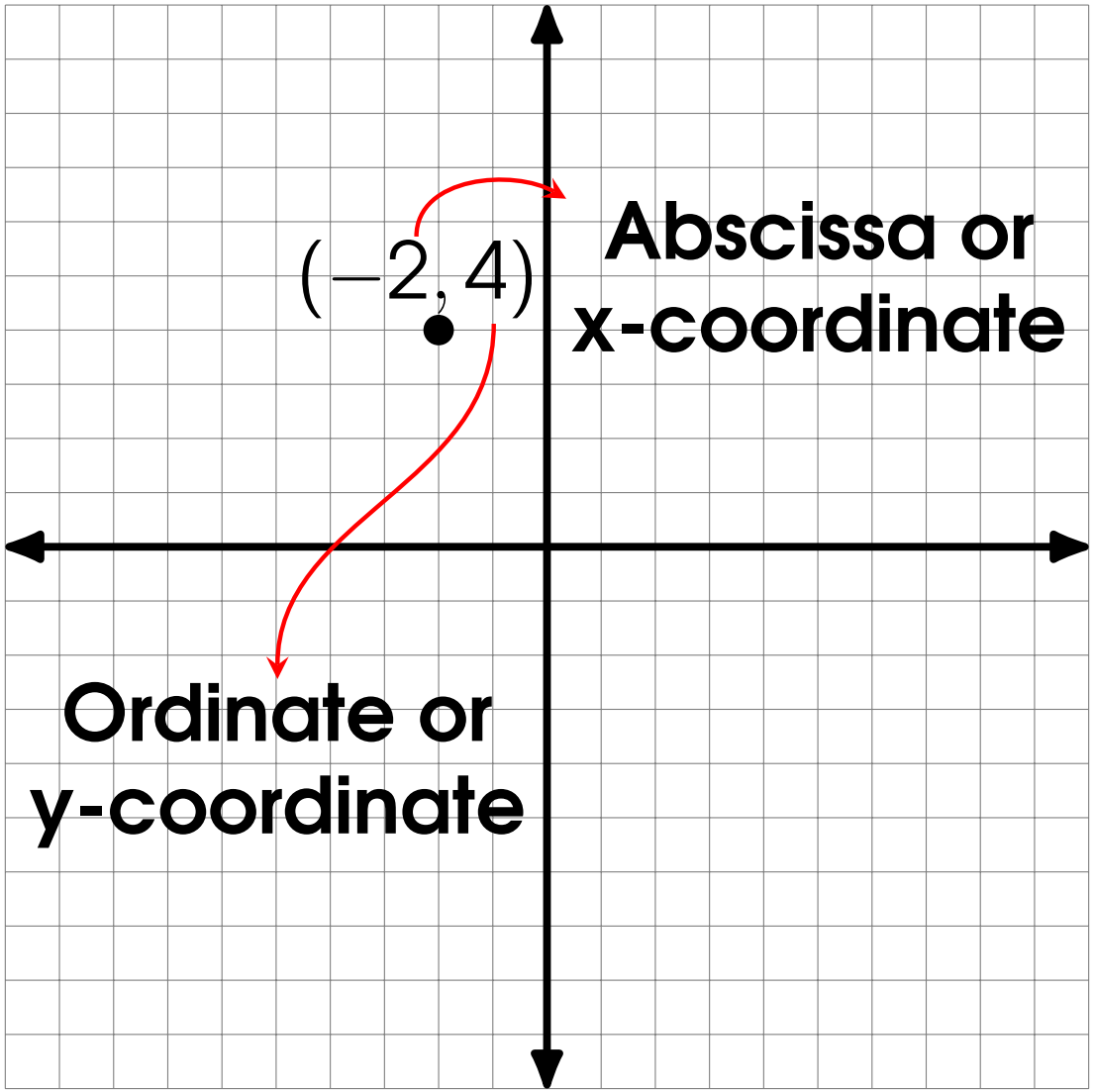
What are the Parts of the Rectangular Coordinate System?



What are the Parts of the Rectangular Coordinate System?



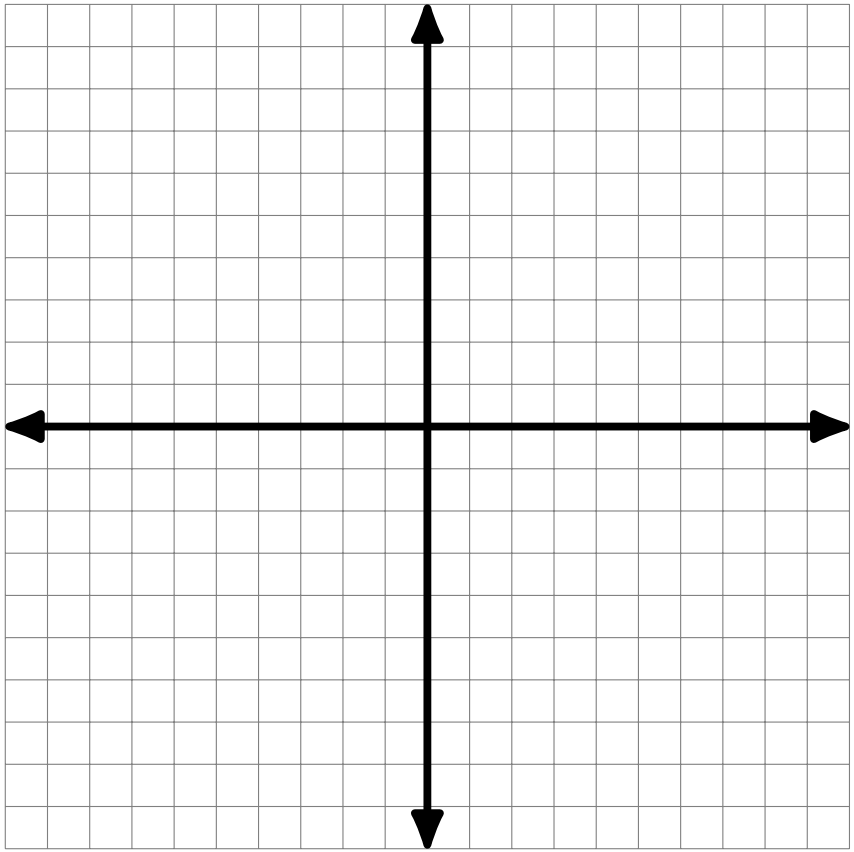
What are the Parts of the Rectangular Coordinate System?



Example 1

Plot each point.

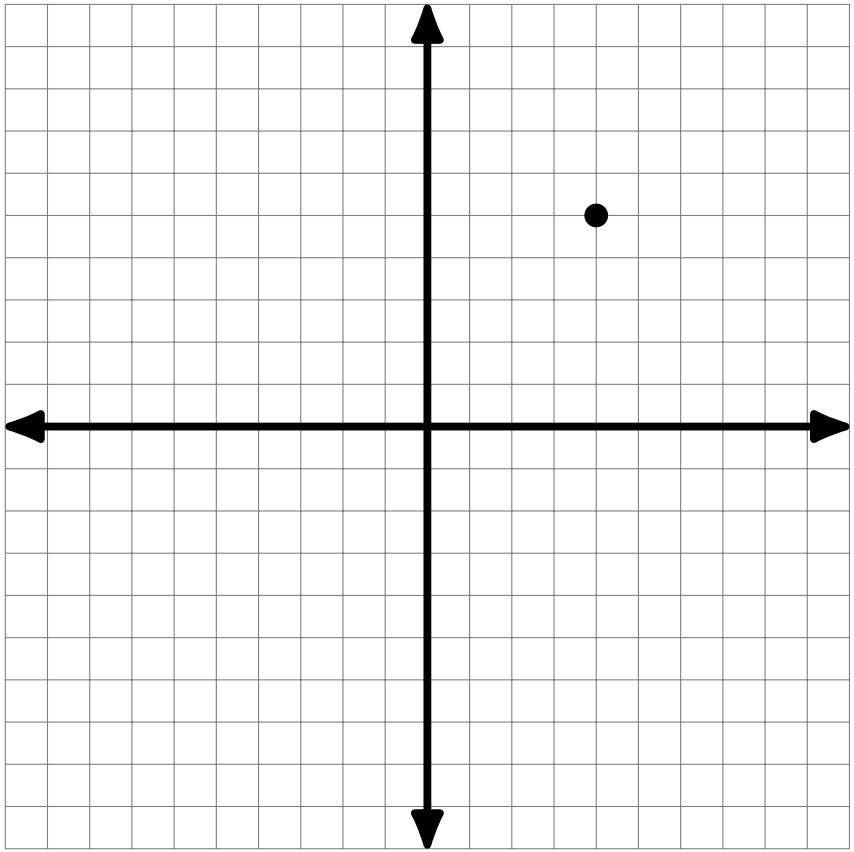
1. $A(4, 5)$
2. $B(7, -6)$
3. $C(-8, 4)$
4. $D(-7, -7)$



Example 1

Plot each point.

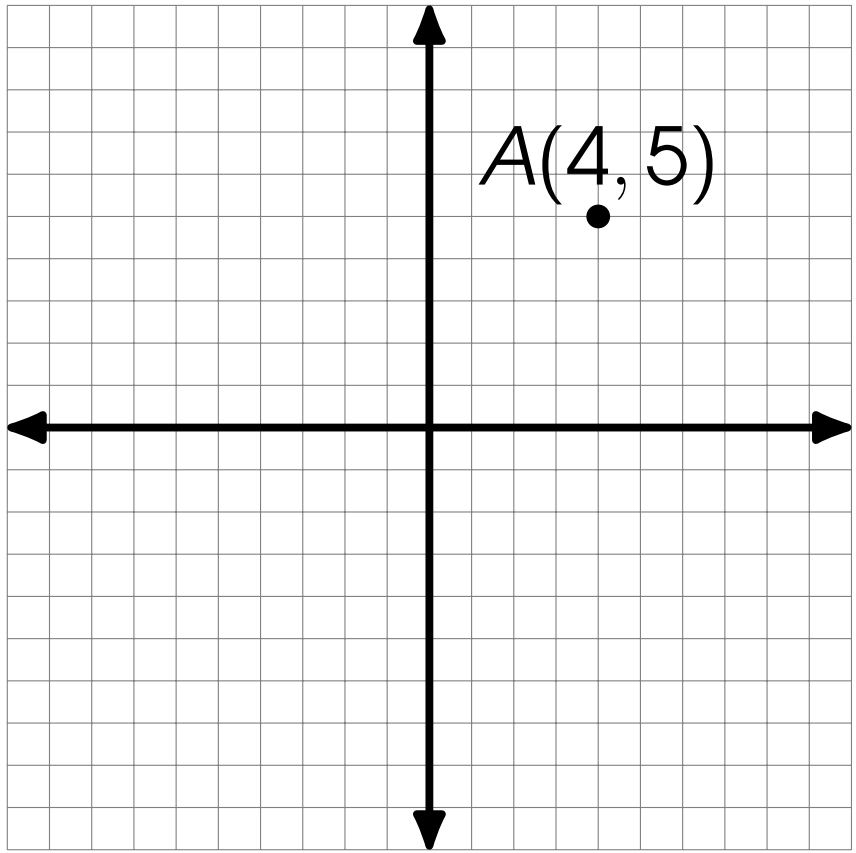
1. $A(4, 5)$
2. $B(7, -6)$
3. $C(-8, 4)$
4. $D(-7, -7)$



Example 1

Plot each point.

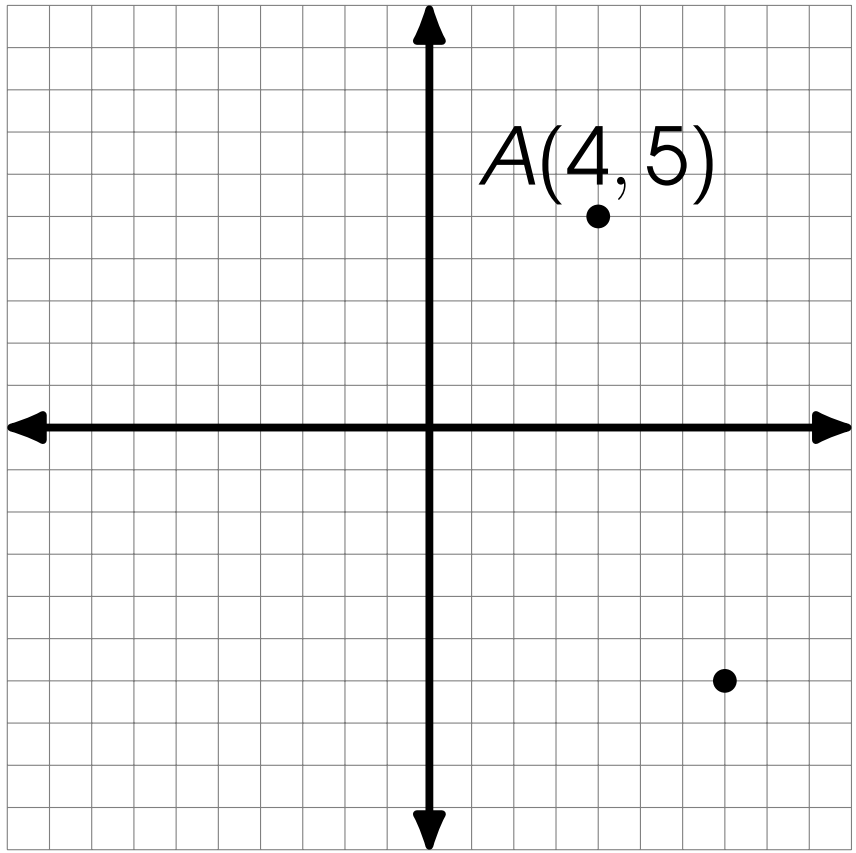
1. $A(4, 5)$
2. $B(7, -6)$
3. $C(-8, 4)$
4. $D(-7, -7)$



Example 1

Plot each point.

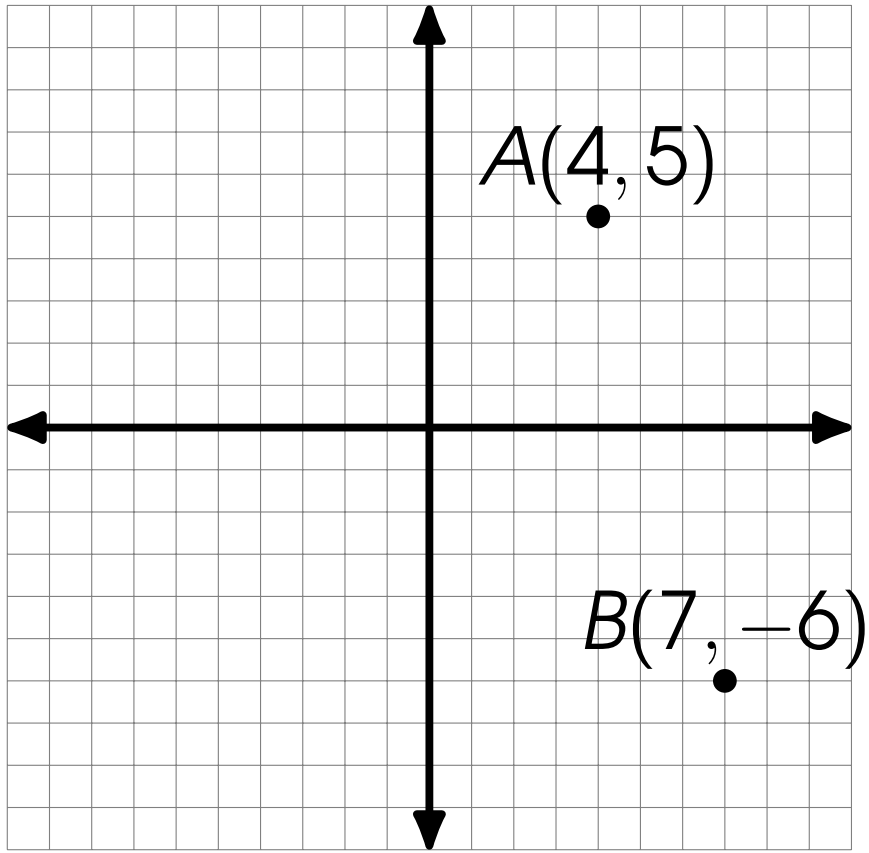
1. $A(4, 5)$
2. $B(7, -6)$
3. $C(-8, 4)$
4. $D(-7, -7)$



Example 1

Plot each point.

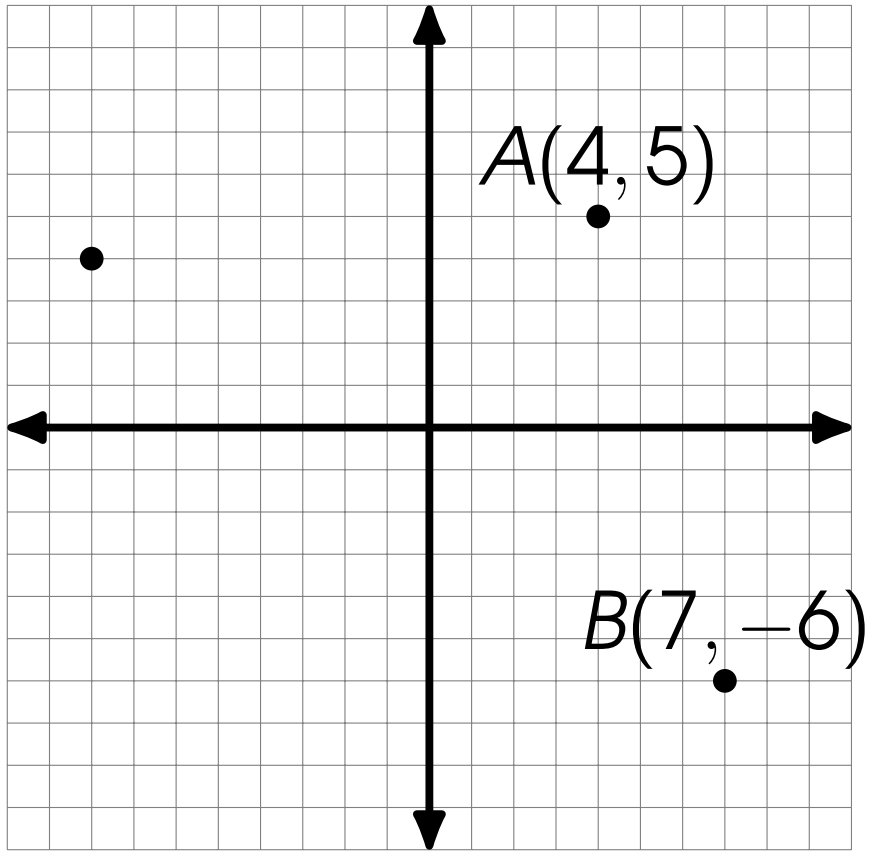
1. $A(4, 5)$
2. $B(7, -6)$
3. $C(-8, 4)$
4. $D(-7, -7)$



Example 1

Plot each point.

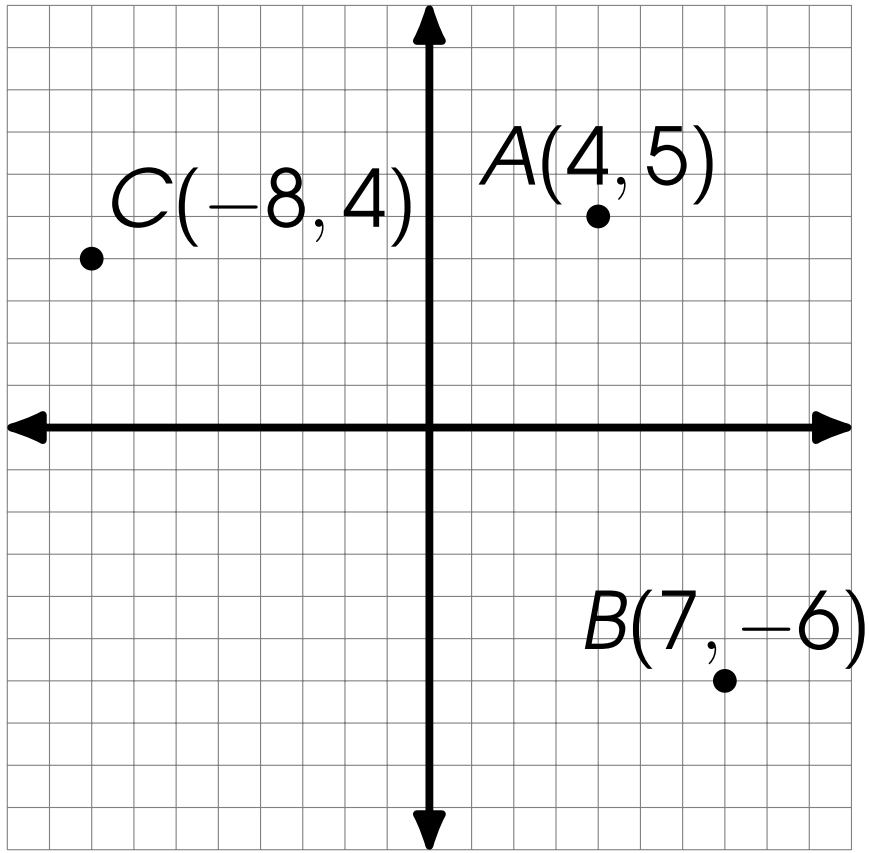
1. $A(4, 5)$
2. $B(7, -6)$
3. $C(-8, 4)$
4. $D(-7, -7)$



Example 1

Plot each point.

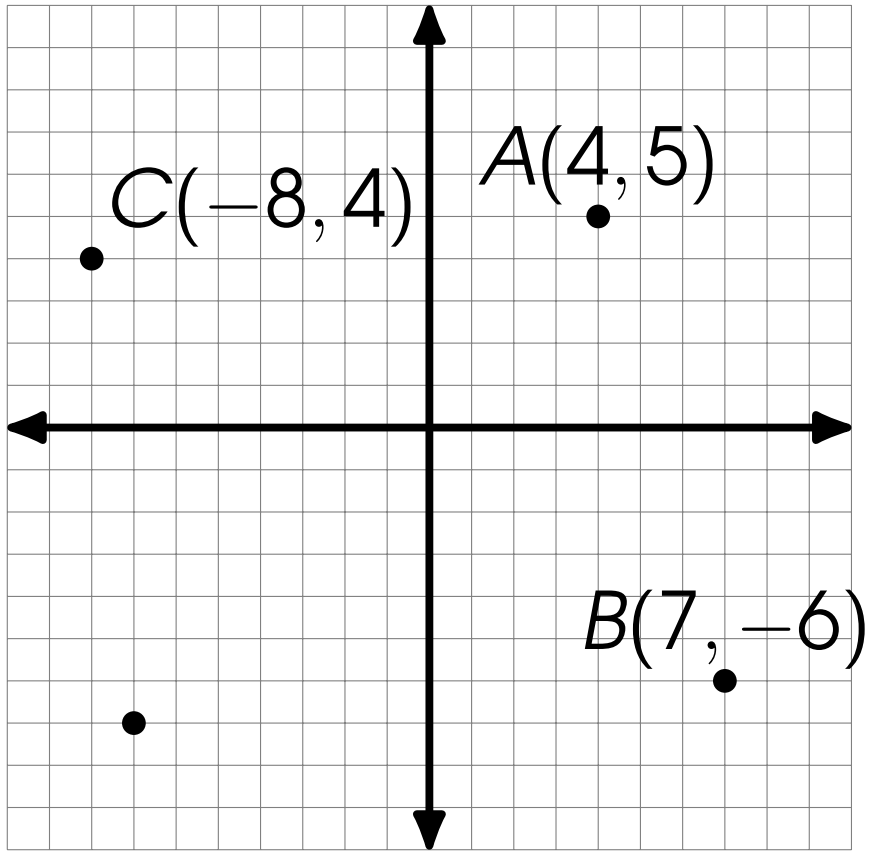
1. $A(4, 5)$
2. $B(7, -6)$
3. $C(-8, 4)$
4. $D(-7, -7)$



Example 1

Plot each point.

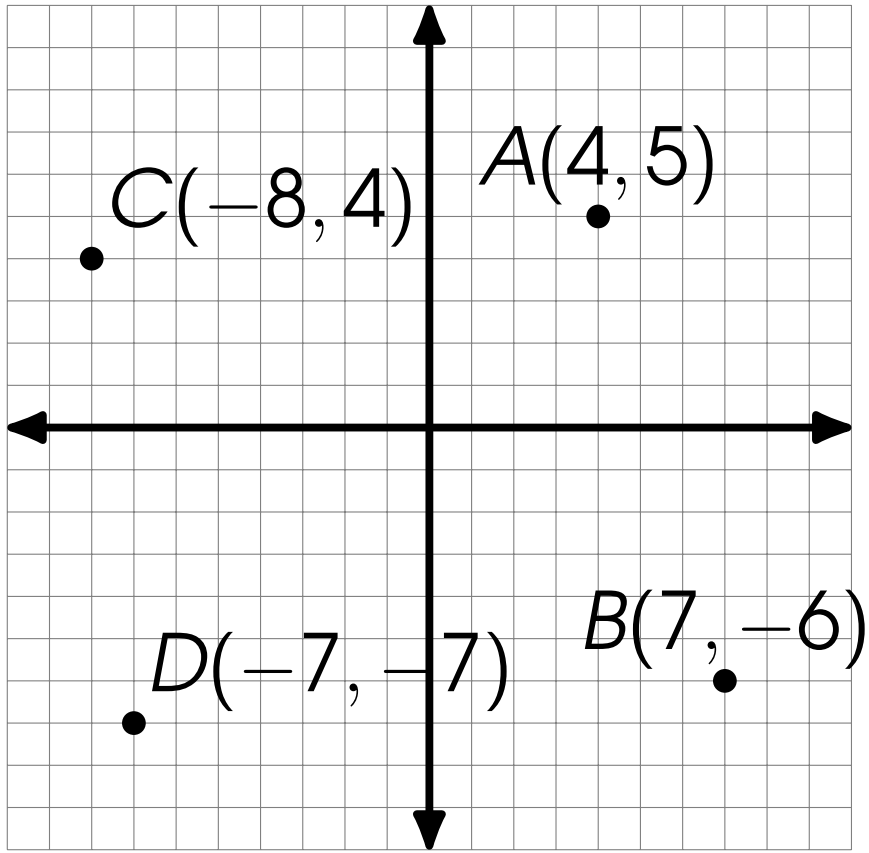
1. $A(4, 5)$
2. $B(7, -6)$
3. $C(-8, 4)$
4. $D(-7, -7)$



Example 1

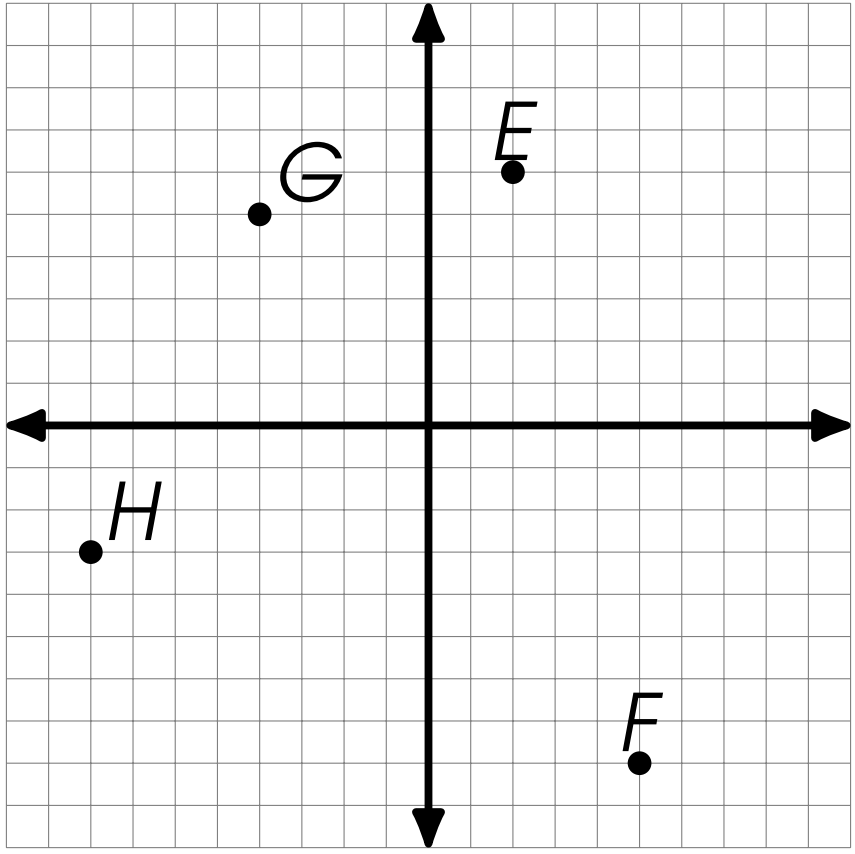
Plot each point.

1. $A(4, 5)$
2. $B(7, -6)$
3. $C(-8, 4)$
4. $D(-7, -7)$



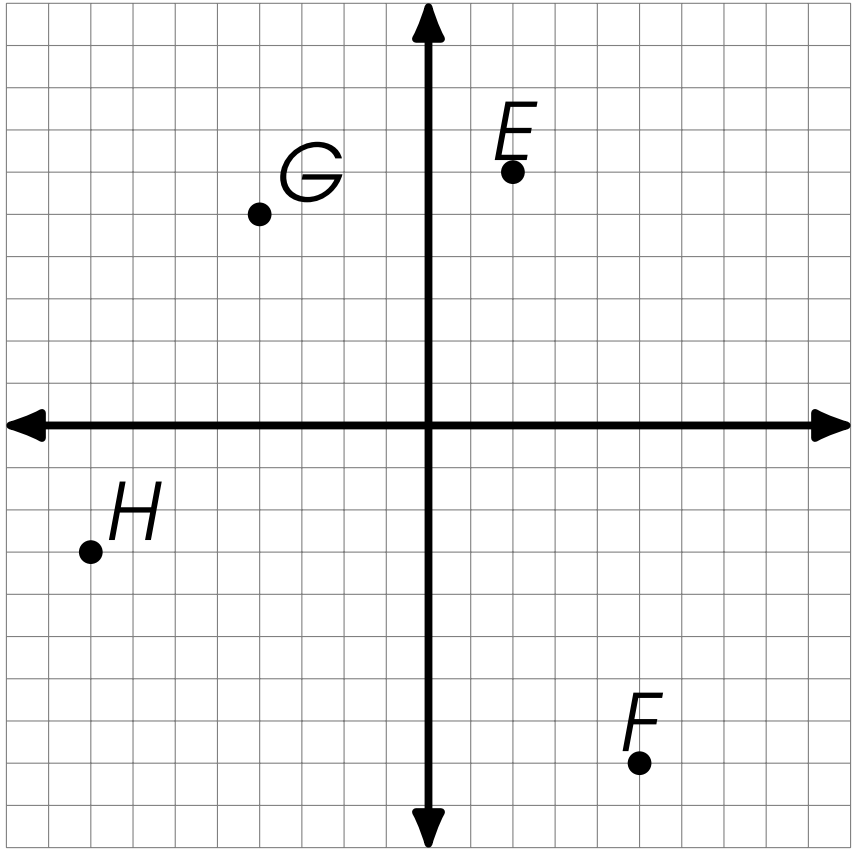
Example 2

State the coordinates of each point.



Example 2

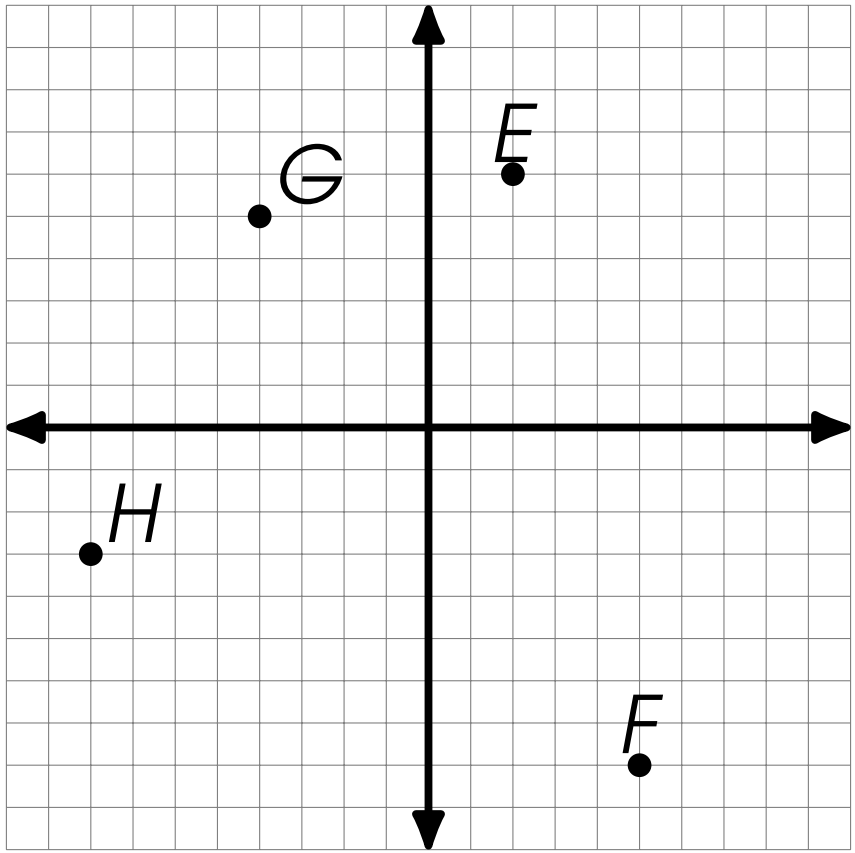
State the coordinates of each point.



1. E

Example 2

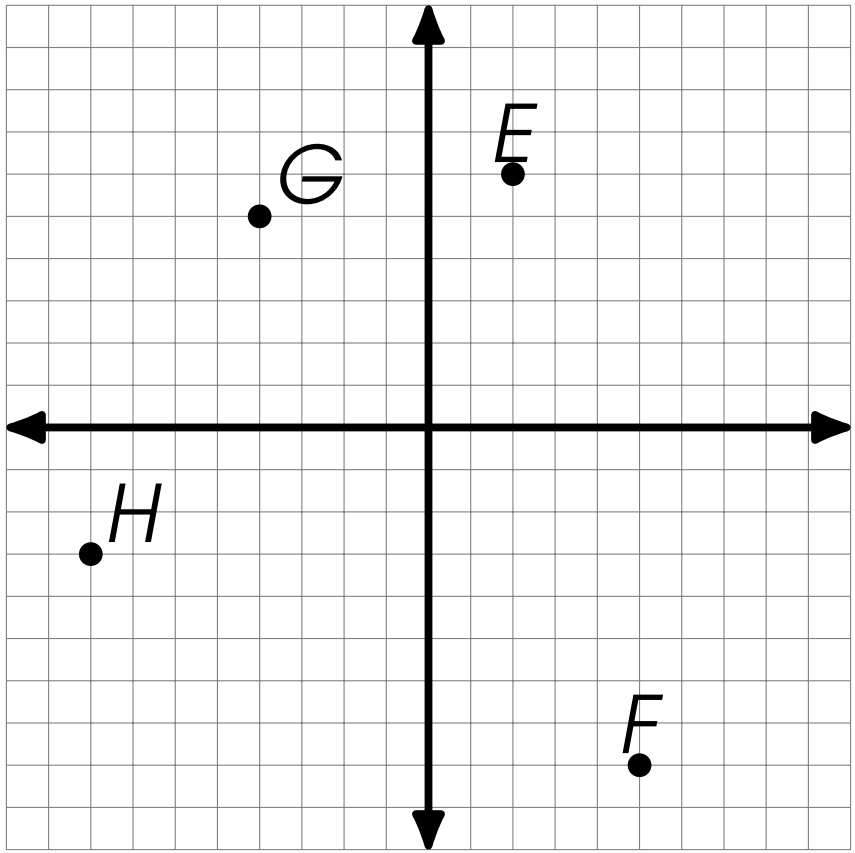
State the coordinates of each point.



1. $E(2,$

Example 2

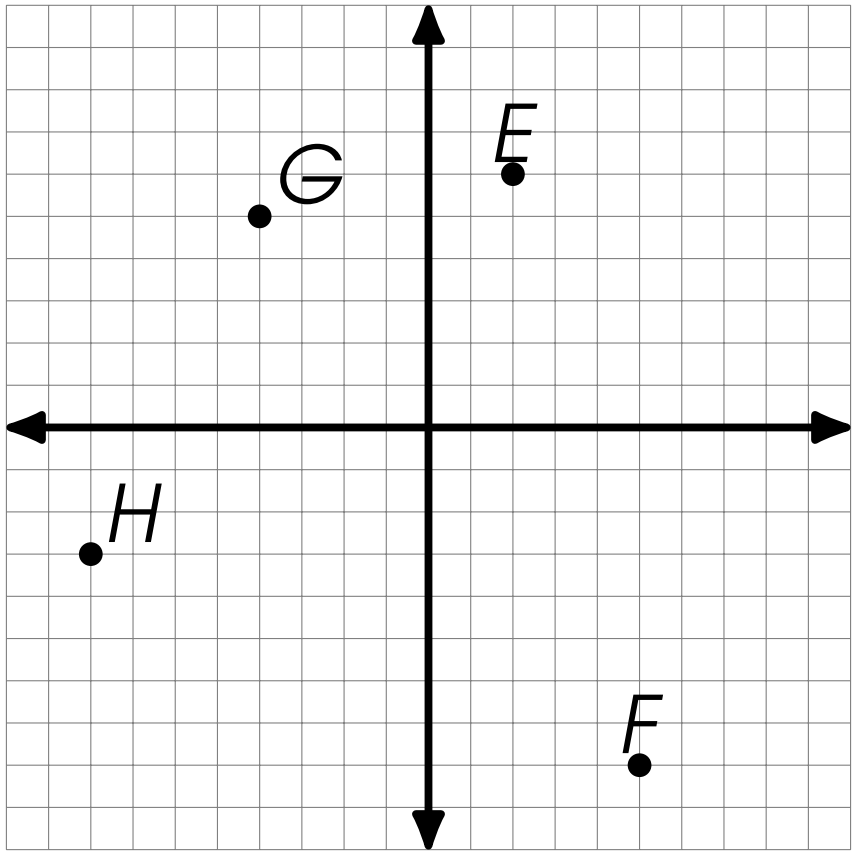
State the coordinates of each point.



1. $E(2, 6)$

Example 2

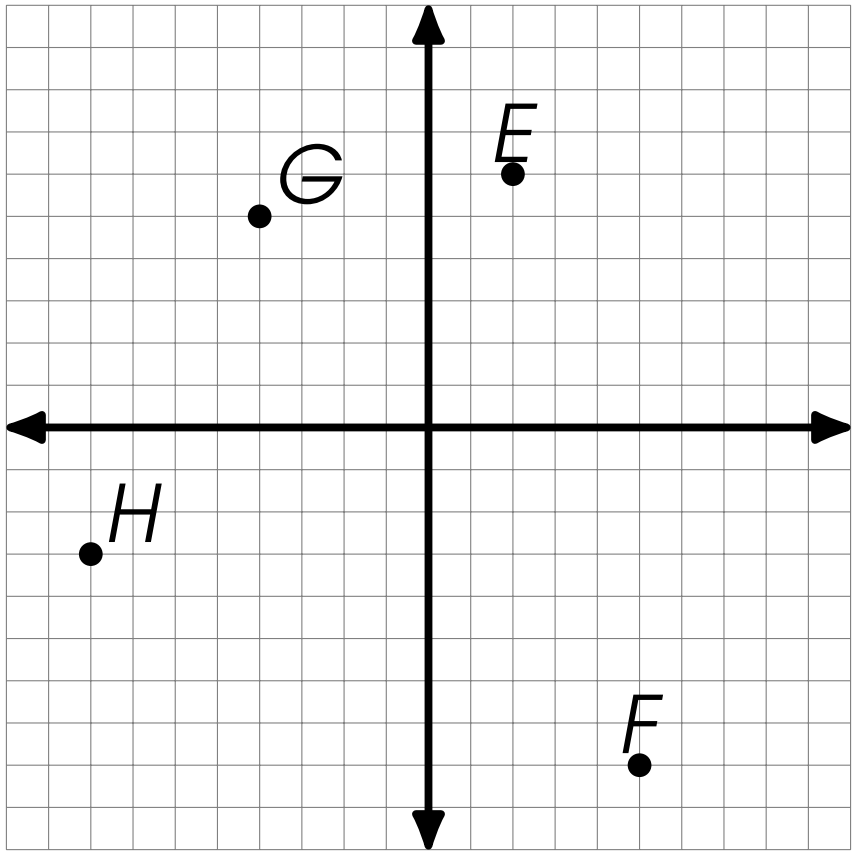
State the coordinates of each point.



1. $E(2, 6)$
2. F

Example 2

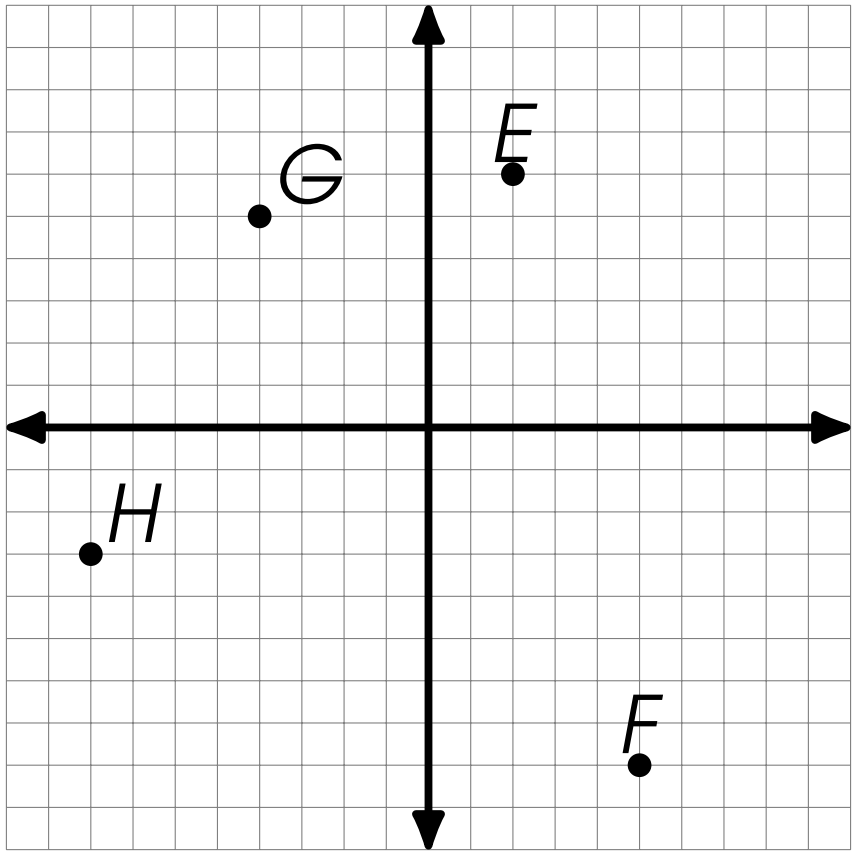
State the coordinates of each point.



1. $E(2, 6)$
2. $F(5,$

Example 2

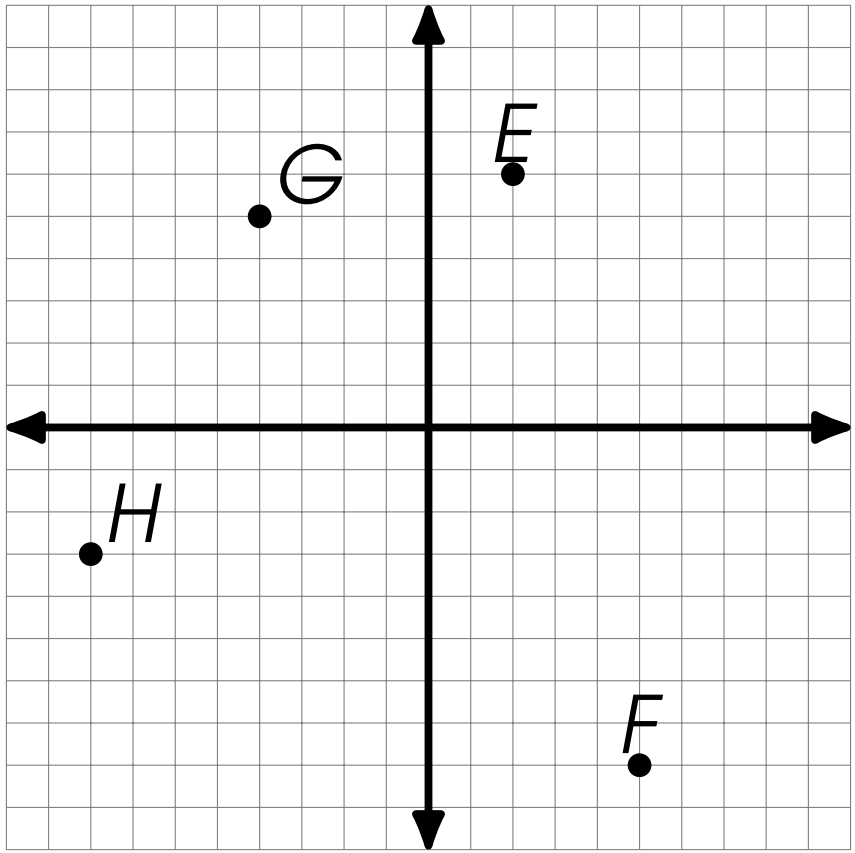
State the coordinates of each point.



1. $E(2, 6)$
2. $F(5, -8)$

Example 2

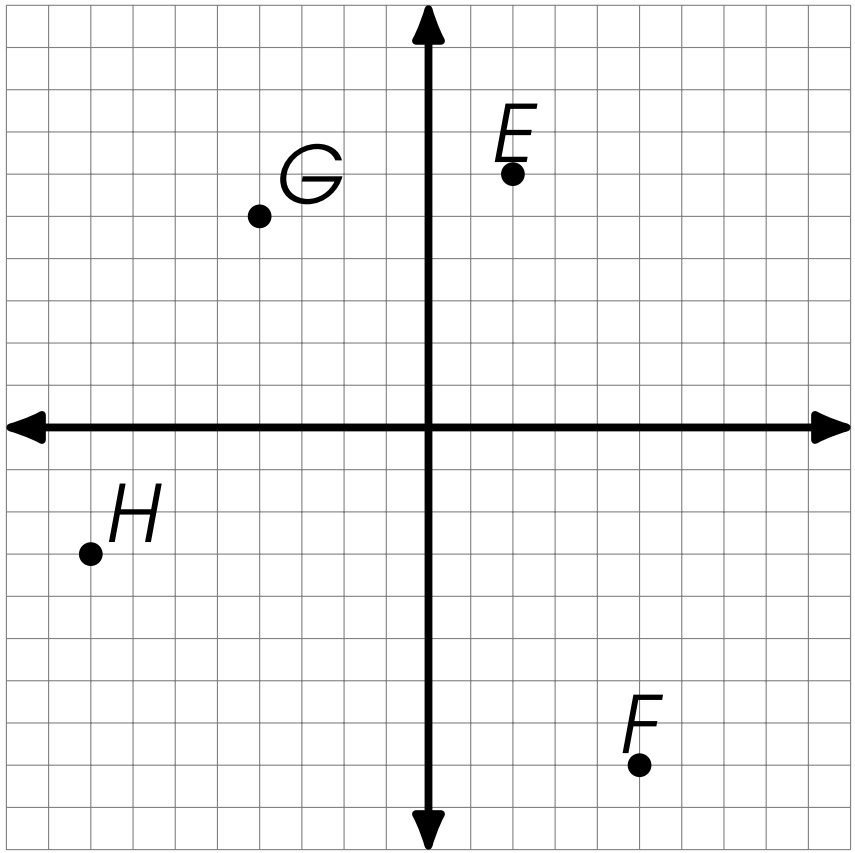
State the coordinates of each point.



1. $E(2, 6)$
2. $F(5, -8)$
3. G

Example 2

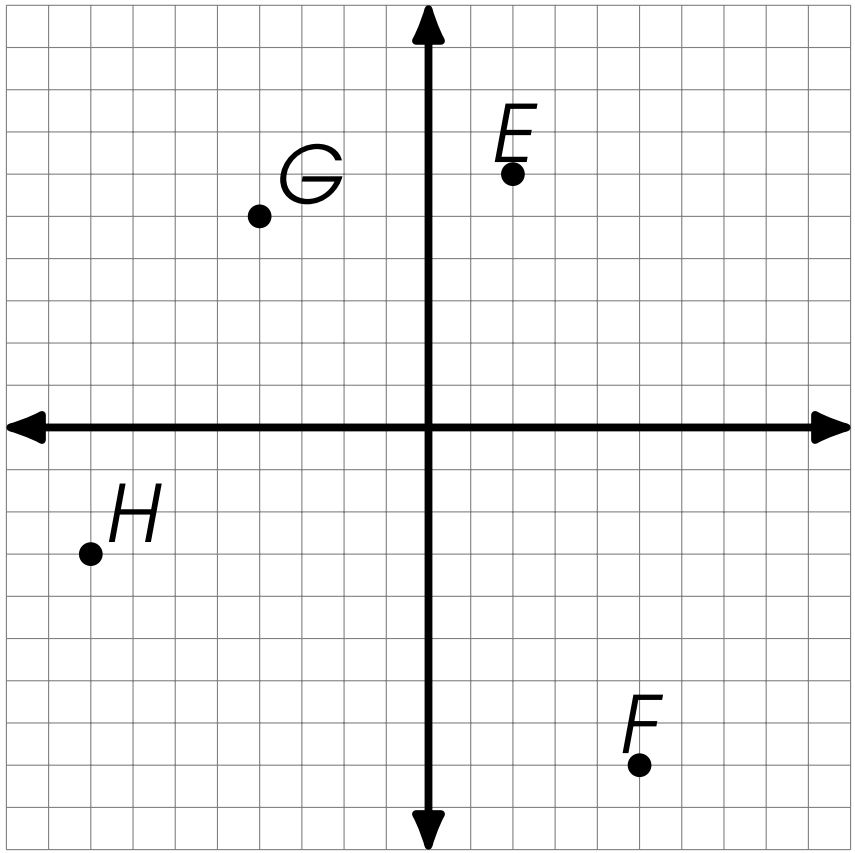
State the coordinates of each point.



1. $E(2, 6)$
2. $F(5, -8)$
3. $G(-4,$

Example 2

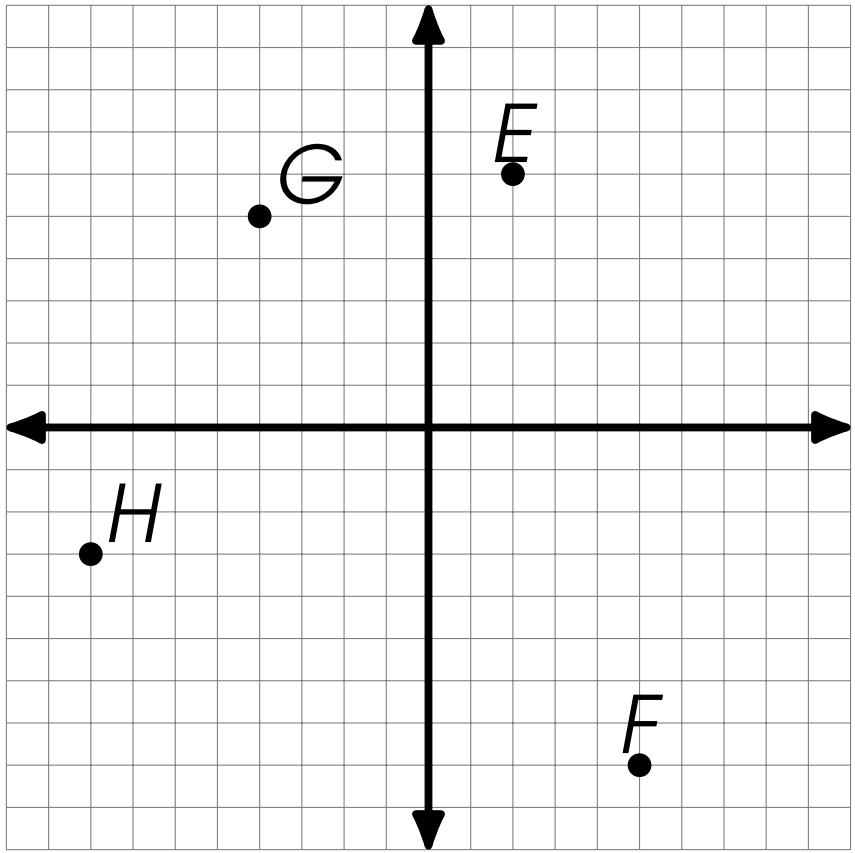
State the coordinates of each point.



1. $E(2, 6)$
2. $F(5, -8)$
3. $G(-4, 5)$

Example 2

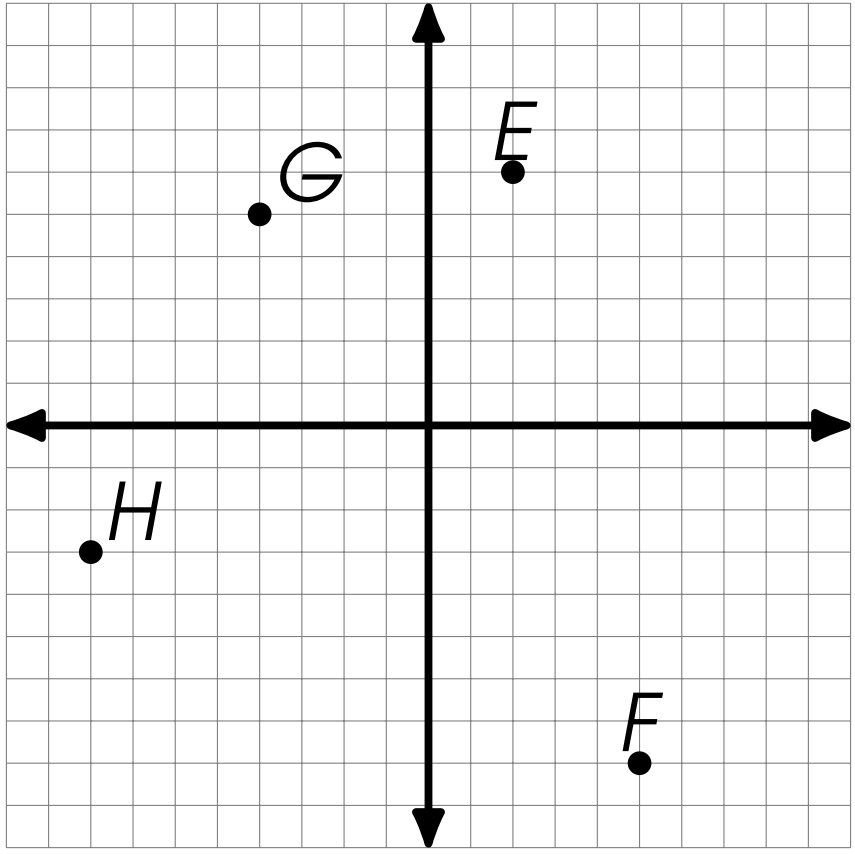
State the coordinates of each point.



1. $E(2, 6)$
2. $F(5, -8)$
3. $G(-4, 5)$
4. H

Example 2

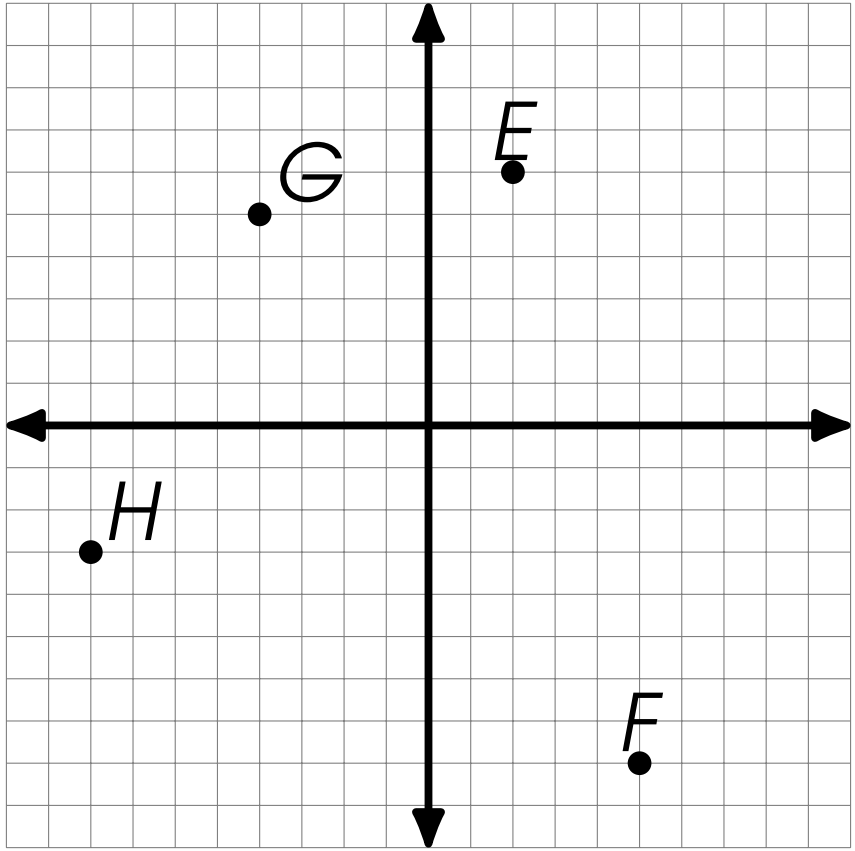
State the coordinates of each point.



1. $E(2, 6)$
2. $F(5, -8)$
3. $G(-4, 5)$
4. $H(-8,$

Example 2

State the coordinates of each point.



1. $E(2, 6)$
2. $F(5, -8)$
3. $G(-4, 5)$
4. $H(-8, -3)$

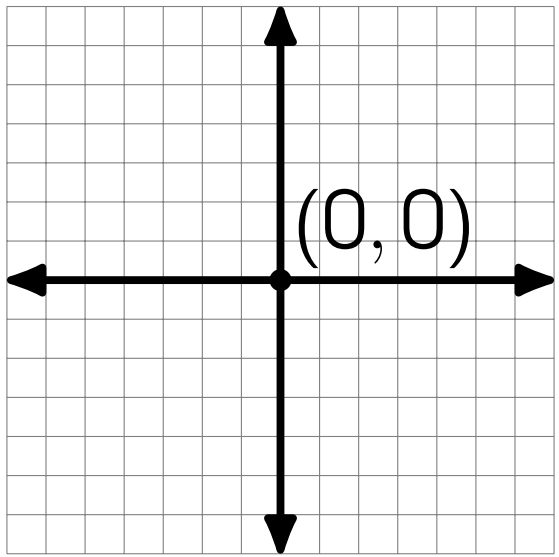
Example 3

State the quadrant or axis that each point lies in.

1. $I(0, -5)$

Example 3

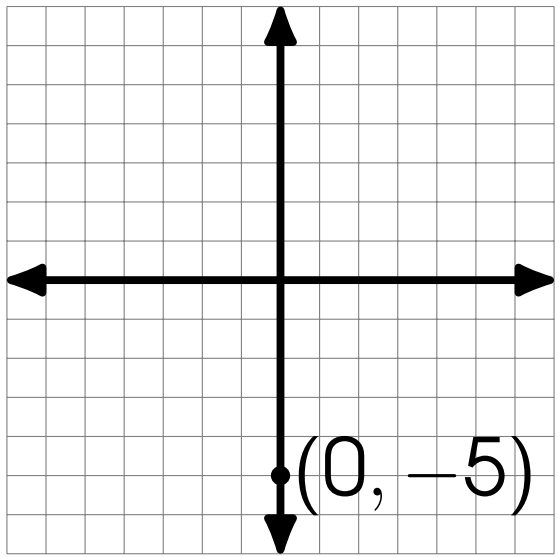
State the quadrant or axis that each point lies in.



1. $I(0, -5)$

Example 3

State the quadrant or axis that each point lies in.



1. $I(0, -5)$

Example 3

State the quadrant or axis that each point lies in.

1. $I(0, -5)$ $y - axis$

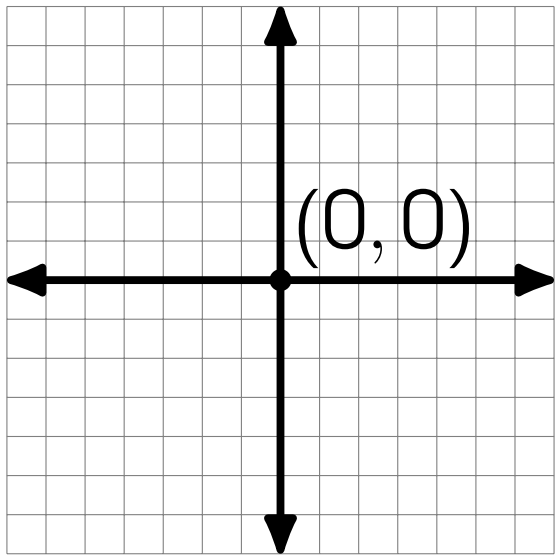
Example 3

State the quadrant or axis that each point lies in.

1. $I(0, -5)$ $y - axis$
2. $J(3, 5)$

Example 3

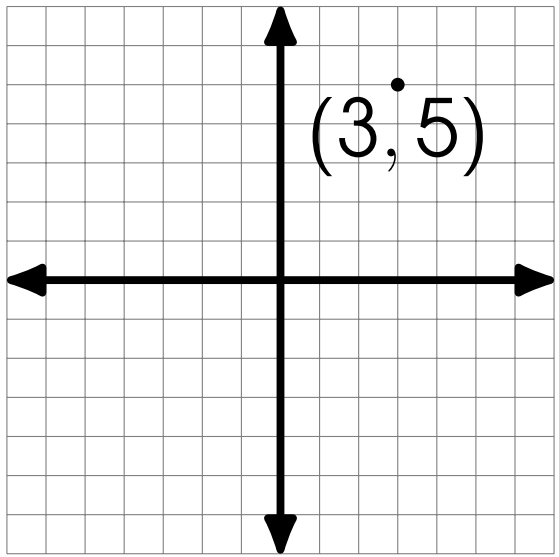
State the quadrant or axis that each point lies in.



1. $I(0, -5)$ $y - axis$
2. $J(3, 5)$

Example 3

State the quadrant or axis that each point lies in.



1. $I(0, -5)$ $y - axis$
2. $J(3, 5)$

Example 3

State the quadrant or axis that each point lies in.

1. $I(0, -5)$ $y - axis$
2. $J(3, 5)$ QI

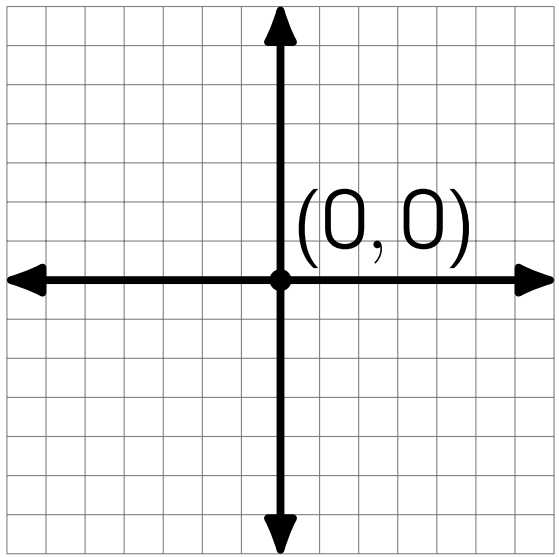
Example 3

State the quadrant or axis that each point lies in.

1. $I(0, -5)$ $y - axis$
2. $J(3, 5)$ QI
3. $K(0, 2)$

Example 3

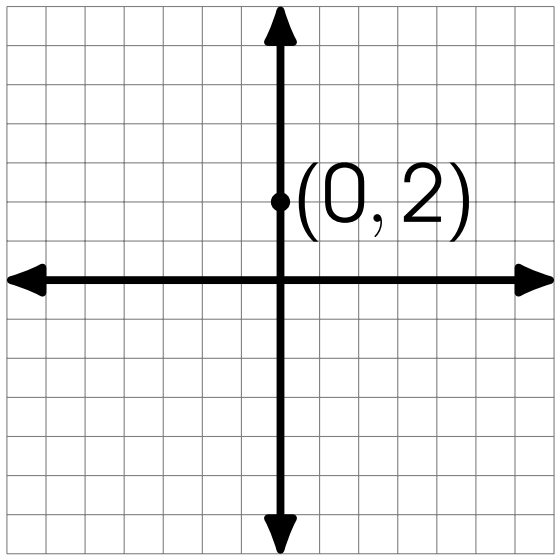
State the quadrant or axis that each point lies in.



1. $I(0, -5)$ $y - axis$
2. $J(3, 5)$ QI
3. $K(0, 2)$

Example 3

State the quadrant or axis that each point lies in.



1. $I(0, -5)$ $y - axis$
2. $J(3, 5)$ QI
3. $K(0, 2)$

Example 3

State the quadrant or axis that each point lies in.

1. $I(0, -5)$ $y - axis$
2. $J(3, 5)$ QI
3. $K(0, 2)$ $y - axis$

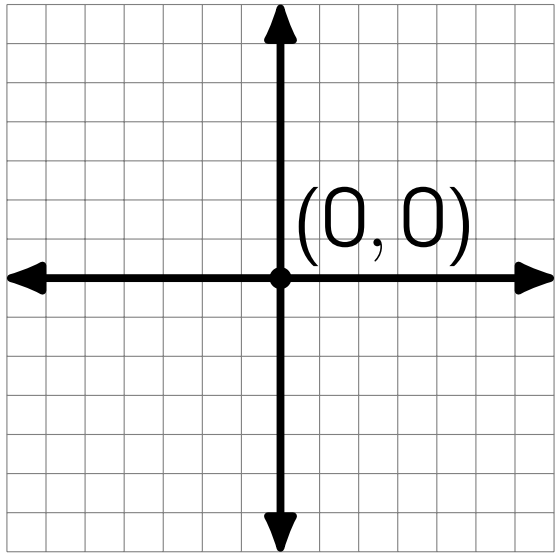
Example 3

State the quadrant or axis that each point lies in.

1. $I(0, -5)$ $y - axis$
2. $J(3, 5)$ QI
3. $K(0, 2)$ $y - axis$
4. $L(4, -5)$

Example 3

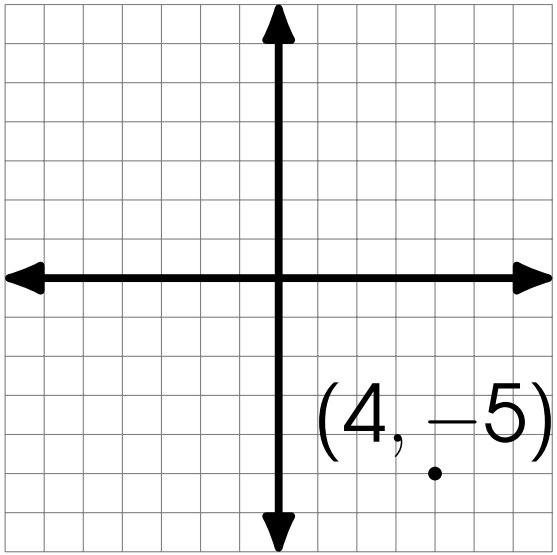
State the quadrant or axis that each point lies in.



1. $I(0, -5)$ $y - axis$
2. $J(3, 5)$ QI
3. $K(0, 2)$ $y - axis$
4. $L(4, -5)$

Example 3

State the quadrant or axis that each point lies in.



1. $I(0, -5)$ $y-axis$
2. $J(3, 5)$ QI
3. $K(0, 2)$ $y-axis$
4. $L(4, -5)$

Example 3

State the quadrant or axis that each point lies in.

1. $I(0, -5)$ $y - axis$
2. $J(3, 5)$ QI
3. $K(0, 2)$ $y - axis$
4. $L(4, -5)$ QIV

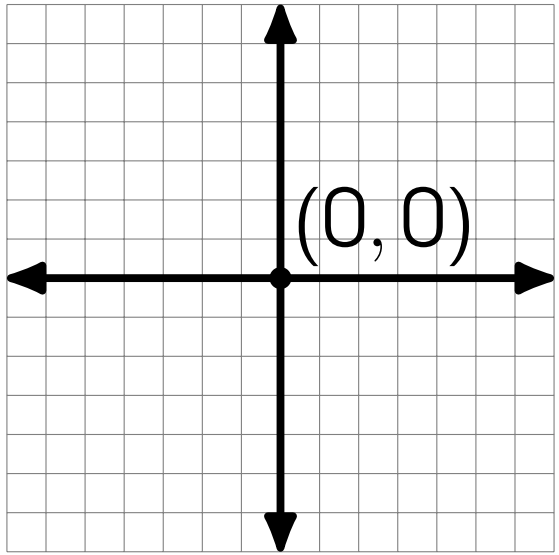
Example 3

State the quadrant or axis that each point lies in.

1. $I(0, -5)$ $y-axis$
2. $J(3, 5)$ QI
3. $K(0, 2)$ $y-axis$
4. $L(4, -5)$ QIV
5. $M(-3, 0)$

Example 3

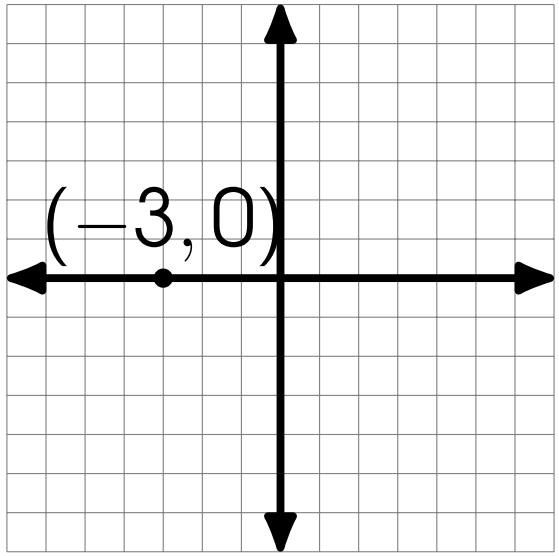
State the quadrant or axis that each point lies in.



1. $I(0, -5)$ $y-axis$
2. $J(3, 5)$ QI
3. $K(0, 2)$ $y-axis$
4. $L(4, -5)$ QIV
5. $M(-3, 0)$

Example 3

State the quadrant or axis that each point lies in.



1. $I(0,-5)$ $y-axis$
2. $J(3,5)$ QI
3. $K(0,2)$ $y-axis$
4. $L(4,-5)$ QIV
5. $M(-3,0)$

Example 3

State the quadrant or axis that each point lies in.

1. $I(0, -5)$ $y-axis$
2. $J(3, 5)$ QI
3. $K(0, 2)$ $y-axis$
4. $L(4, -5)$ QIV
5. $M(-3, 0)$ $x-axis$

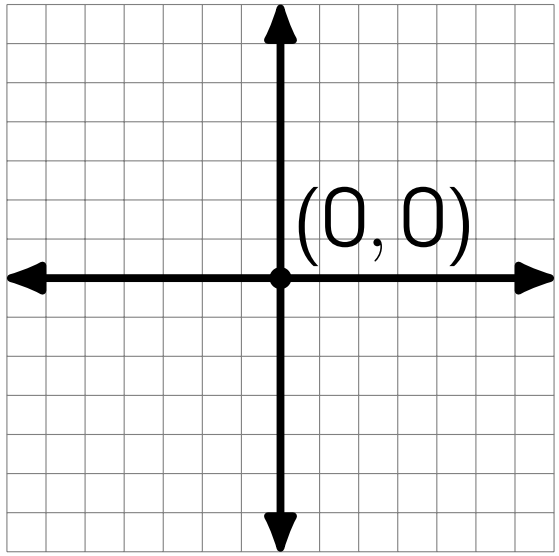
Example 3

State the quadrant or axis that each point lies in.

1. $I(0, -5)$ $y-axis$
2. $J(3, 5)$ QI
3. $K(0, 2)$ $y-axis$
4. $L(4, -5)$ QIV
5. $M(-3, 0)$ $x-axis$
6. $N(-5, 1)$

Example 3

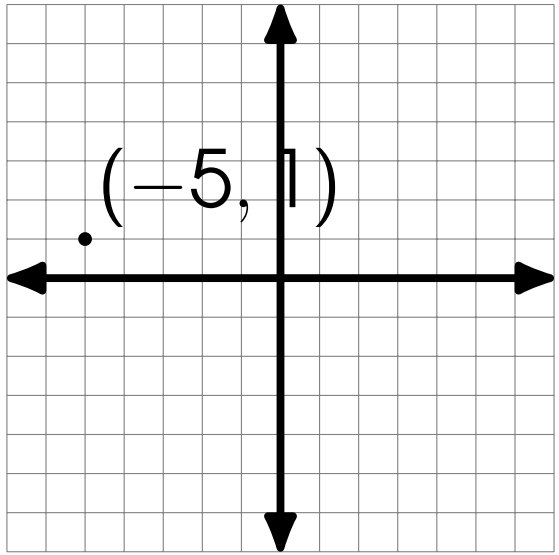
State the quadrant or axis that each point lies in.



1. $I(0, -5)$ $y-axis$
2. $J(3, 5)$ QI
3. $K(0, 2)$ $y-axis$
4. $L(4, -5)$ QIV
5. $M(-3, 0)$ $x-axis$
6. $N(-5, 1)$

Example 3

State the quadrant or axis that each point lies in.



1. $I(0, -5)$ $y-axis$
2. $J(3, 5)$ QI
3. $K(0, 2)$ $y-axis$
4. $L(4, -5)$ QIV
5. $M(-3, 0)$ $x-axis$
6. $N(-5, 1)$

Example 3

State the quadrant or axis that each point lies in.

1. $I(0, -5)$ $y-axis$
2. $J(3, 5)$ QI
3. $K(0, 2)$ $y-axis$
4. $L(4, -5)$ QIV
5. $M(-3, 0)$ $x-axis$
6. $N(-5, 1)$ QII

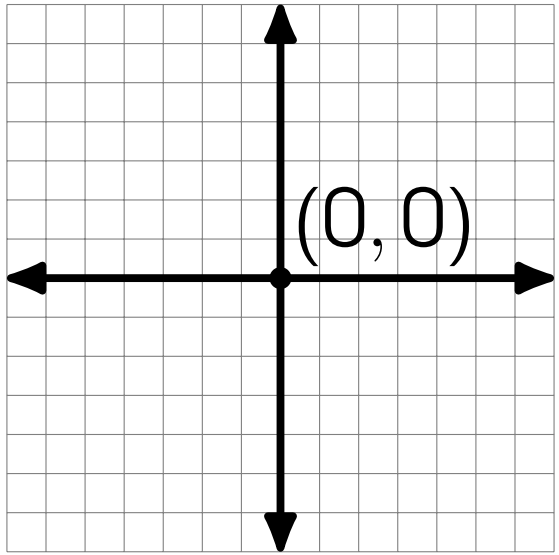
Example 3

State the quadrant or axis that each point lies in.

1. $I(0,-5)$ $y-axis$
2. $J(3,5)$ QI
3. $K(0,2)$ $y-axis$
4. $L(4,-5)$ QIV
5. $M(-3,0)$ $x-axis$
6. $N(-5,1)$ QII
7. $O(1,0)$

Example 3

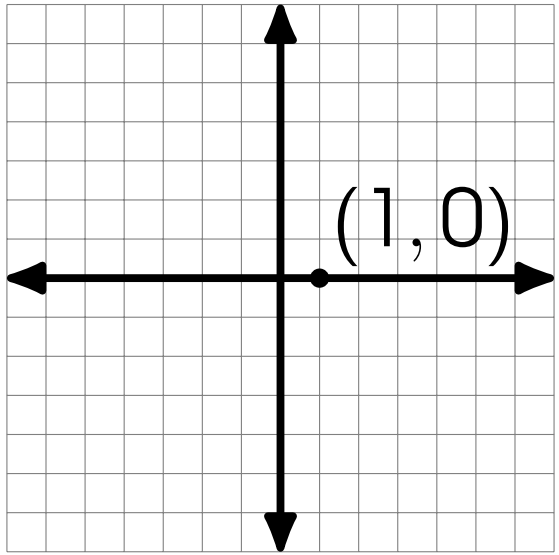
State the quadrant or axis that each point lies in.



1. $I(0, -5)$ $y-axis$
2. $J(3, 5)$ QI
3. $K(0, 2)$ $y-axis$
4. $L(4, -5)$ QIV
5. $M(-3, 0)$ $x-axis$
6. $N(-5, 1)$ QII
7. $O(1, 0)$

Example 3

State the quadrant or axis that each point lies in.



1. $I(0, -5)$ $y-axis$
2. $J(3, 5)$ QI
3. $K(0, 2)$ $y-axis$
4. $L(4, -5)$ QIV
5. $M(-3, 0)$ $x-axis$
6. $N(-5, 1)$ QII
7. $O(1, 0)$

Example 3

State the quadrant or axis that each point lies in.

1. $I(0,-5)$ $y-axis$
2. $J(3,5)$ QI
3. $K(0,2)$ $y-axis$
4. $L(4,-5)$ QIV
5. $M(-3,0)$ $x-axis$
6. $N(-5,1)$ QII
7. $O(1,0)$ $x-axis$

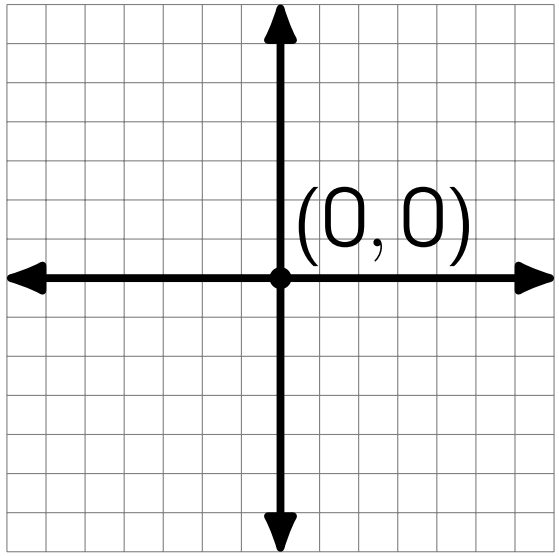
Example 3

State the quadrant or axis that each point lies in.

1. $I(0,-5)$ $y-axis$
2. $J(3,5)$ QI
3. $K(0,2)$ $y-axis$
4. $L(4,-5)$ QIV
5. $M(-3,0)$ $x-axis$
6. $N(-5,1)$ QII
7. $O(1,0)$ $x-axis$
8. $P(-3,-5)$

Example 3

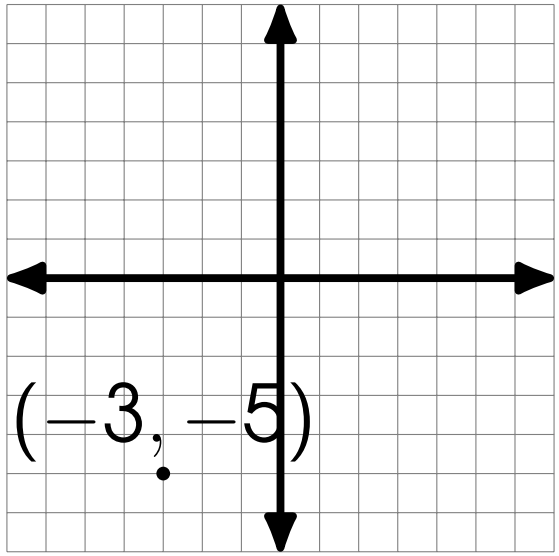
State the quadrant or axis that each point lies in.



1. $I(0, -5)$ $y-axis$
2. $J(3, 5)$ QI
3. $K(0, 2)$ $y-axis$
4. $L(4, -5)$ QIV
5. $M(-3, 0)$ $x-axis$
6. $N(-5, 1)$ QII
7. $O(1, 0)$ $x-axis$
8. $P(-3, -5)$

Example 3

State the quadrant or axis that each point lies in.



1. $I(0,-5)$ $y-axis$
2. $J(3,5)$ QI
3. $K(0,2)$ $y-axis$
4. $L(4,-5)$ QIV
5. $M(-3,0)$ $x-axis$
6. $N(-5,1)$ QII
7. $O(1,0)$ $x-axis$
8. $P(-3,-5)$

Example 3

State the quadrant or axis that each point lies in.

1. $I(0, -5)$ $y-axis$
2. $J(3, 5)$ QI
3. $K(0, 2)$ $y-axis$
4. $L(4, -5)$ QIV
5. $M(-3, 0)$ $x-axis$
6. $N(-5, 1)$ QII
7. $O(1, 0)$ $x-axis$
8. $P(-3, -5)$ $QIII$

Thank you for watching.