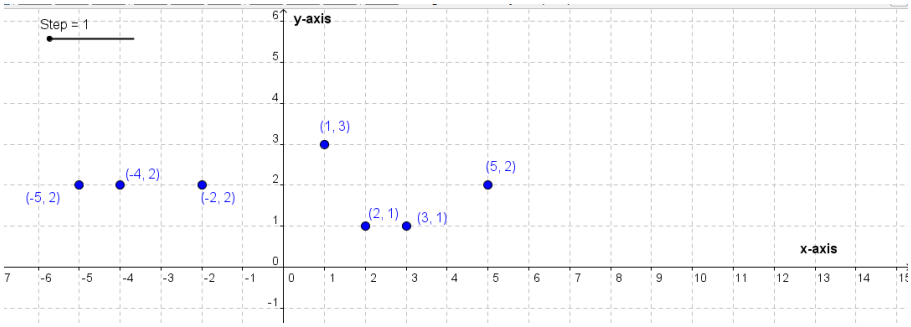
Student Activity on Axes and Quadrants

Use in connection with the interactive file "Axes and Quadrants" on the Student's CD.

To explore the relationship between the coordinates of points and the plane



The slider called "Step" is used to change the information on the screen.

To start set the slider to "Step = 1"

1. Move all the blue dots to the x-axis. What do you notice about the coordinates of all the points?_____

_____

2. Move all the blue dots to the y-axis. What do you notice about the coordinates of all the points?_____

_____

3. How many points are on the x-axis?_____

4. How many points are on the y-axis?_____

5. How many points are on the x-axis **and** the y-axis?_____

6. Write down the coordinates of this point?_____

7. The point where the x-axis and y-axis meets has a name. Write down this name if you know it._____

8. Move "Step" along so it says "2". The x-axis and y-axis divide the plane into a certain number of parts. How many parts?_____

9. Each of these parts is called a quadrant. Move the blue point around. The text beside the point should tell where the point is. Can you think of any possible reason why the first quadrant is where it is?_____

10. There are lots of points that aren't in any quadrant. If a point is not in any of the quadrants it must be where? _____

11. Move "Step" along so it says "3".

What is the same for all points on the x-axis?_____

What is the same for all points on the y-axis?_____

Write down the coordinates of the origin._____

Complete the following sentences:

(a) All points in the first quadrant_____

_____

(b) All points in the second quadrant_____

_____

(c) All points in the third quadrant_____

_____

(d) All points in the fourth quadrant_____

_____

(e) All points on the x-axis_____

_____

(f) All points on the y-axis_____