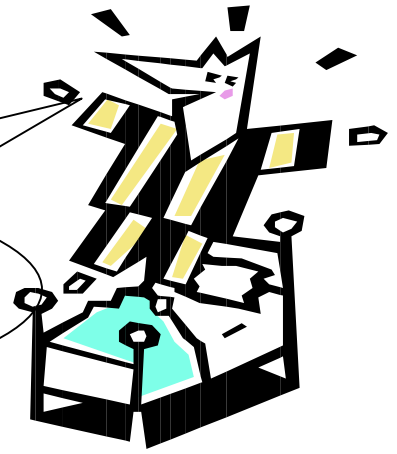


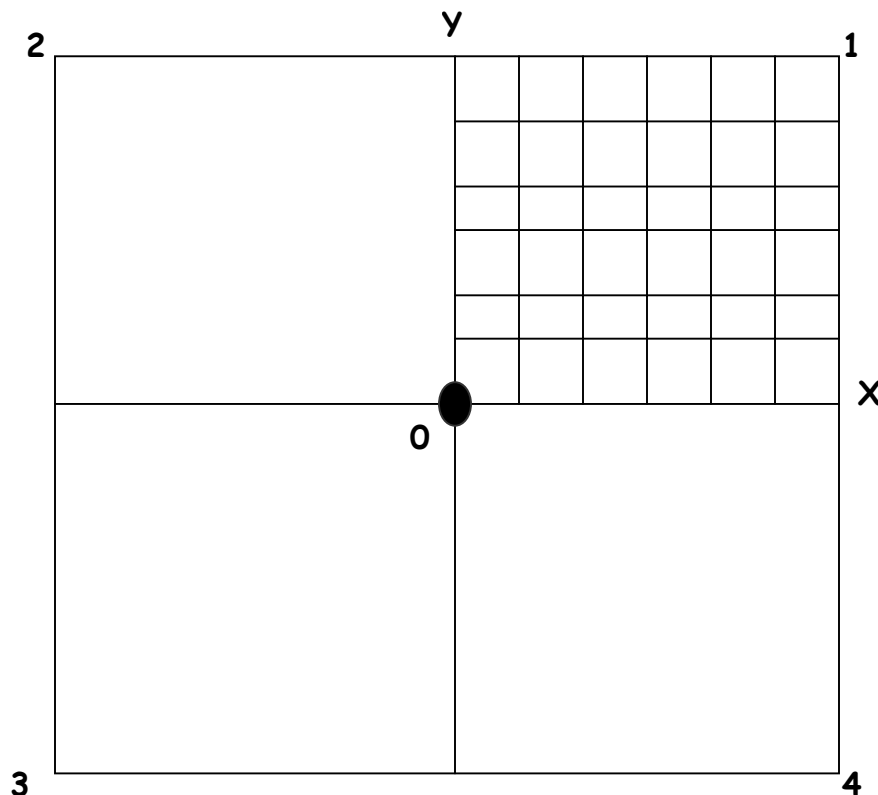
# Teaching Instructions for

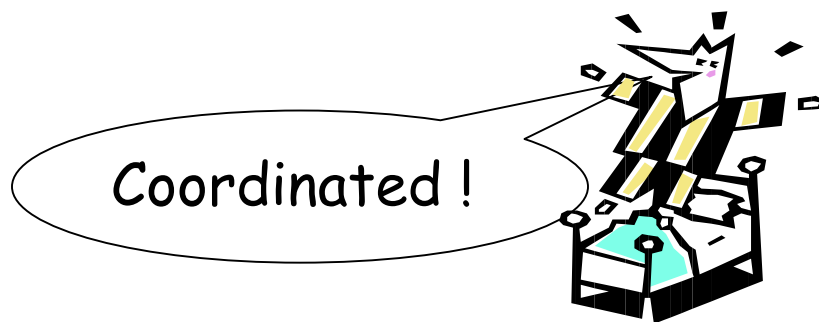
# Coordinated!



**DRAW** on the chalkboard or white board:

- A. A large square (Name it, a square; Guess what it is, a tangram; Ask, Why do you think so?)
- B. A horizontal line in the center of the square (Name it, a horizontal line; Guess what it is, line of symmetry or two congruent rectangles, or a reflection of a rectangle; Ask, Why do you think so?)
- C. A vertical line in the center of the square (Name it, a vertical line; Guess what it is, a line of symmetry or a quilt or squares within rectangles or squares within squares, or congruent squares; Ask, Why do you think so?)
- D. Label the horizontal line with an 'X' (Name it 'X'; Guess what it is, ?; Ask, Why do you think so?)
- E. Label the vertical line with a 'Y' (Name it 'Y'; Guess what it is, ?; Ask, Why do you think so?)
- F. Make a dot at the center of the square (Name it, a point; Guess what it is, a pinwheel; Ask, Why do you think so?)
- G. Label the dot in the center '0' (Name it, a zero; Guess what it is, ?; Ask, Why do you think so?)
- H. Number each small square (Starting at the top right square with one, and moving in a counter clockwise direction two, three, four.)
- I. Add five vertical lines, evenly spaced, to the first Quadrant.
- J. Add five horizontal lines, evenly spaced, to the first Quadrant.





**SEE THE NEXT PAGE FOR THE DIAGRAM THAT ACCOMPANIES THIS SET OF INSTRUCTIONS**

**DISCUSS:**

- A. Students will probably think this is the start of a quilt square design. Facilitate a short discussion allowing students to draw similarities between the grid drawing and a quilt or quilt block design.

**EXPLAIN:**

- A. This is actually a type of geometry called coordinate geometry. Ask students to explain what they think coordinate means. Students may think of coordinate in terms of being agile. Agree restating that being coordinated means you are not clumsy. Guide them to thinking in terms of their outfit, as in coordinating their shirt with their shorts. They should say that to coordinate means to match two things that go together.
- B. The drawing is of a coordinate grid. The center horizontal line is always called the 'X axis'. The center vertical line is always called the 'Y axis'.
- C. Tell students we will only be learning how to use Quadrant # 1 and call on a student to point out Quadrant #1. Allow students to locate Quadrant # 2, # 3, and # 4. Once this is determined, state again that we are only interested in Quadrant # 1, so you are going to erase the other three quadrants.

Erase Quadrants 2, 3, and 4.

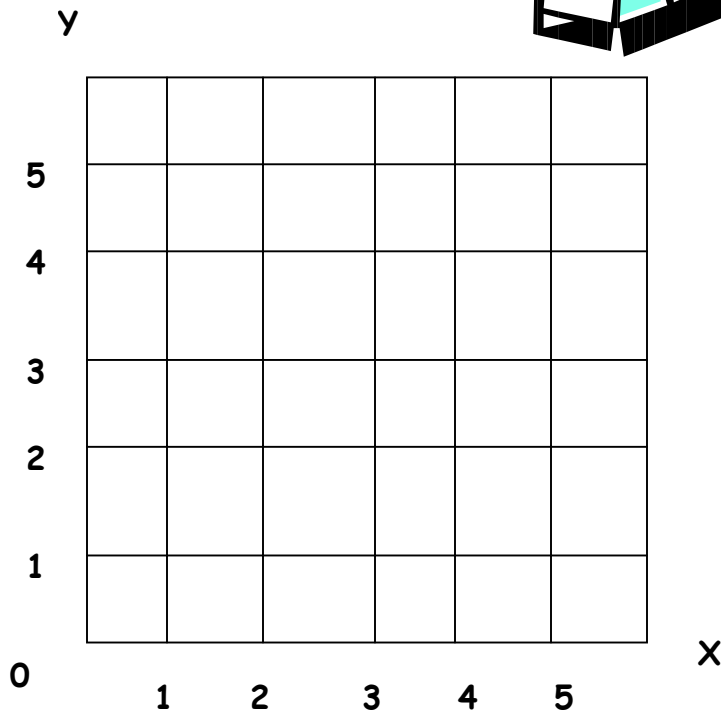
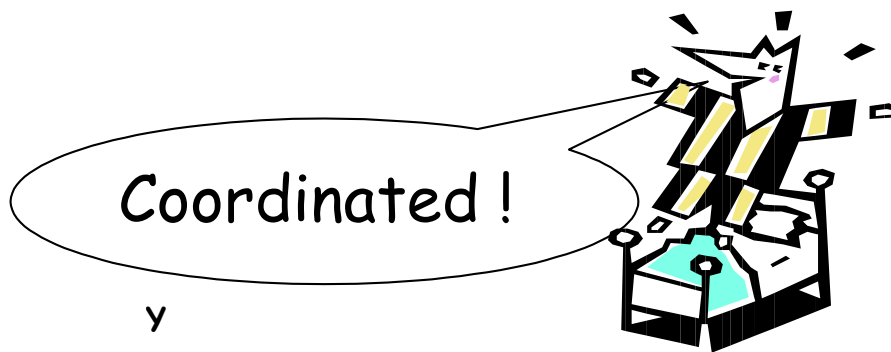
**ASK:** What does the drawing remind you of? (Geo board)

**EXPLAIN:**

A. In coordinate geometry we learn to match numbers to locate points. We use coordinates or matching numbers to find places on the surface.

For students: If the center point is always zero, what do you think the point on the next line over would be? (1)  
The next? (2) Etc.  
Add the numbers on the X-axis as students count.

For students: If the center point is always zero, what do you think the point on the next line up would be? (1)  
The next? (2) The next? Etc.  
Add the numbers on the Y-axis as students count.



**EXPLAIN:**

The '0' point is called the origin. When we are locating a named point, we always start at the origin and count, first to the right, and then up.

**EXAMPLE:**

The coordinates are (2,3). (Write the coordinates on the board so students will see how they are written in parenthesis.) Let's locate them. Allow a student to tell you what to do. Use your finger to indicate each point as you count out loud. (One, Two) Now we count up. (One, Two, Three) Here is the point with the coordinates of (2,3).

Who can help me find (1,5)?

**TIP:**

If students have a hard time remembering in which direction to go first when counting, give them the tip that X comes before Y in the alphabet, so we always count along the X axis first.

**PRACTICE**, finding numerous points by locating the coordinates.

**ADD** the words coordinate grid and coordinates on the Quilt Word Board (Lesson 2).

Students add these words with illustrations to their Glossary (Lesson 9, Bringing it to a Fine Gloss-ary) at a learning center (Lesson 13, Reflections) at an appropriate time of the day.