

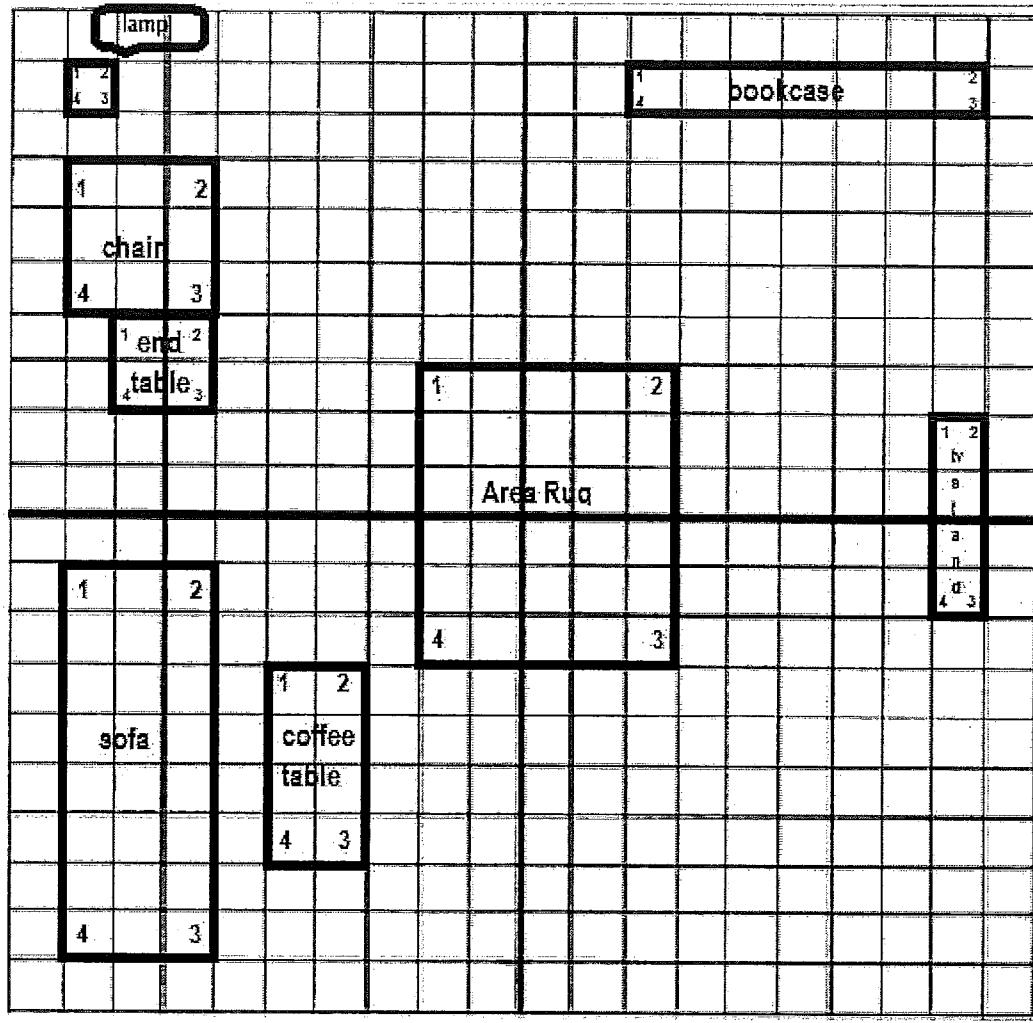
Name: \_\_\_\_\_ Per: \_\_\_\_\_ Date: \_\_\_\_\_

### Geometry Unit 4 Task "Living Room Furniture"

#### Criterion B: Patterns and C: Communications

After moving into a new apartment, the Thompsons decided on the layout below for their living room. (The distance between gridlines is 1 foot.) Note the four corner points of each piece of furniture in the diagram below:

Living Room Furniture Layout (Before)



Piece of Furniture	Corner 1 Coordinates	Corner 2 Coordinates	Corner 3 Coordinates	Corner 4 Coordinates
Sofa	(-9,-1)	(-6,-1)	(6,-9)	(-9,-9)
Coffee Table	(-5,-3)	(-3,-3)	(-3,-7)	(-5,-7)
End table	(-8,4)	(-6,4)	(-6,2)	(-8,-2)
Chair	(-9,7)	(-6,7)	(-6,4)	(-9,4)
Lamp	(-9,9)	(-8,9)	(-8,8)	(-9,8)
Bookcase	(2,9)	(9,9)	(9,8)	(2,8)
Area Rug	(-2,3)	(3,3)	(3,-3)	(-2,-3)
Tv stand	(8,2)	(9,2)	(9,-2)	(8,-2)

## Directions to Redecorate the Living Room!!

1. *Translate the end table by the vector  $\langle 0, -3 \rangle$ . Graph on your Before Layout, label and shade.*

Write the rule of the Transformation.

Describe the change in the coordinates.

Write the coordinate change as a general rule.

2. *Translate the chair by the vector  $\langle 3, 2 \rangle$ . Graph on your Before Layout, label and shade.*

Write the rule of the Transformation.

Describe the change in the coordinates.

Write the coordinate change as a general rule.

3. *Rotate the book case  $90^\circ$  clockwise. Graph on your Before Layout, label and shade.*

Write the rule of the Transformation.

Describe the change in the coordinates.

Write the coordinate change as a general rule.

4. *Reflect the coffee table over the line  $y = -x$ . Graph on your Before Layout, label and shade.*

Write the rule of the Transformation.

Describe the change in the coordinates.

Write the coordinate change as a general rule.

5. *Dilate the Area Rug by a factor of  $\frac{1}{2}$ . Graph on your Before Layout, label and shade.*

Write the rule of the Transformation.

Describe the change in the coordinates.

Write the coordinate change as a general rule.