Before

Piece of Furniture	Corner 1 Coordinates	Corner 2 Coordinates	Corner 3 Coordinates	Corner 4 Coordinates
End Table	(-5, -4)	(-8, -4)	(-5, -7)	(-8, -7)
Sofa	(-5, -4)	(-5, -8)	(5, -4)	(5, -8)
End Table	(5, -4)	(8, -4)	(5, -7)	(8, -7)
Coffee Table	(-3, 1.5)	(-3, -1.5)	(3, 1.5)	(3, -1.5)
Bookcase	(-2, 6)	(-2, 8)	(-6, 6)	(-6, 8)
TV Stand	(-2, 6)	(-2, 7)	(2, 6)	(2, 7)
Bookcase	(2, 6)	(2, 8)	(4, 6)	(6, 8)

Oct 20-9:01 AM

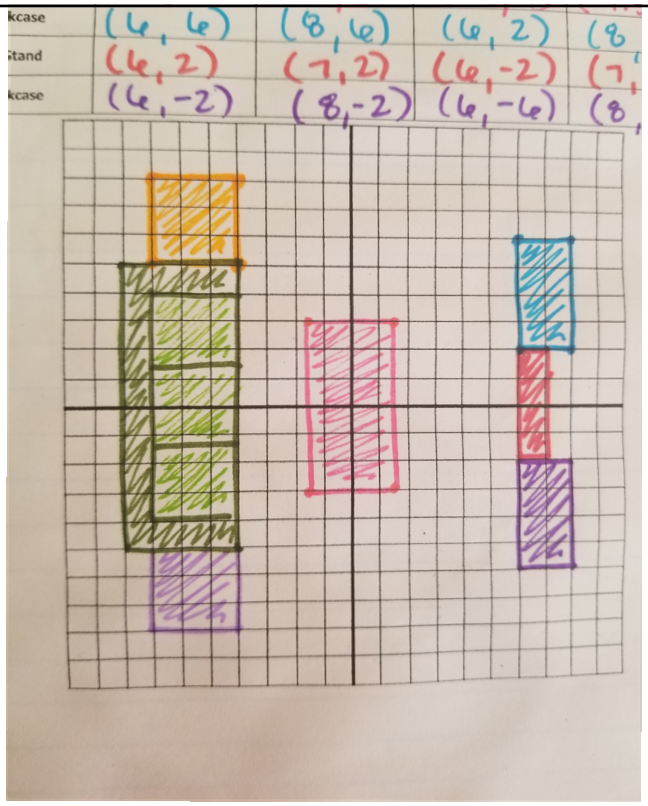
Living Room Furniture Layout (Rotation)

After originally having the living room set up as in the "before" layout, the Harrison's found that the glare from the sun coming through the window made it difficult to watch TV. They decide to rotate the room about the center (the origin) 90 degrees clockwise so that the window is behind the TV. Find the four corner points of each piece of furniture in the new layout:

$(x, y) \rightarrow (y, -x)$

Piece of Furniture	Corner 1 Coordinates	Corner 2 Coordinates	Corner 3 Coordinates	Corner 4 Coordinates
End Table	(-4, 5)	(-4, 8)	(-7, 5)	(-7, 8)
Sofa	(-4, 5)	(-8, 5)	(-4, -5)	(-8, -5)
End Table	(-4, -5)	(-4, -8)	(-7, -5)	(-7, -8)
Coffee Table	(1.5, 3)	(-1.5, 3)	(1.5, -3)	(-1.5, -3)
Bookcase	(6, 2)	(8, 2)	(6, 6)	(8, 6)
TV Stand	(6, 2)	(7, 2)	(6, -2)	(7, -2)
Bookcase	(6, -2)	(8, -2)	(6, -6)	(8, -6)

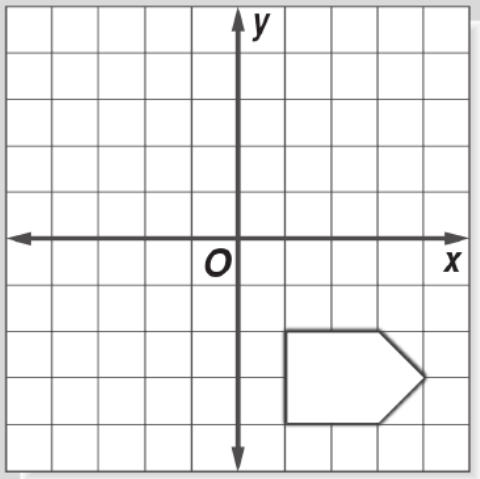
Oct 20-8:39 AM



Oct 20-9:03 AM

JC pg 69: U4-Composite Transformations

Name:



Perform a translation using (x, y) → (x − 3, y), then reflect the figure across the x-axis.

Composite Transformation

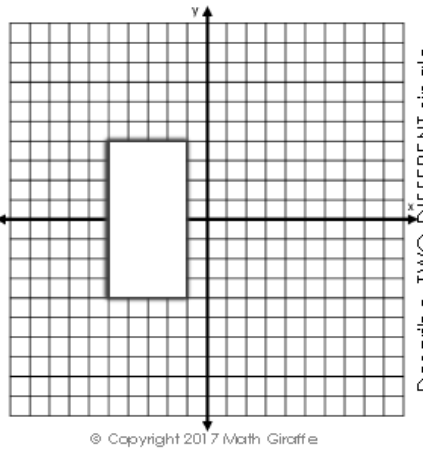
A TRANSFORMATION is... a change made to a figure in the coordinate plane.

ISOMETRY: a transformation that does not change the size or shape of a figure.

Oct 20-8:35 AM

TRY IT:

Rotate the figure 180° around the origin, then reflect it across the line $x = 5$.



Describe TWO DIFFERENT single transformations that each could have achieved the same image in one step?

Any combination of rotations, translations and reflections will always maintain the size & shape of the original figure.

Oct 20-8:36 AM

Oct 20-1:09 PM