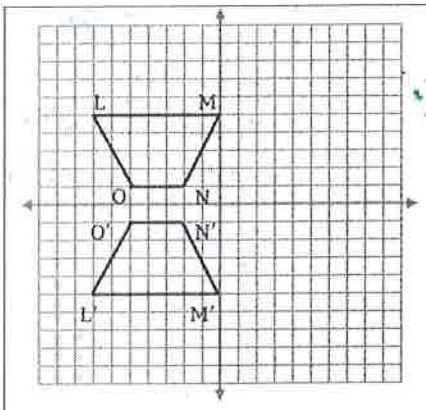
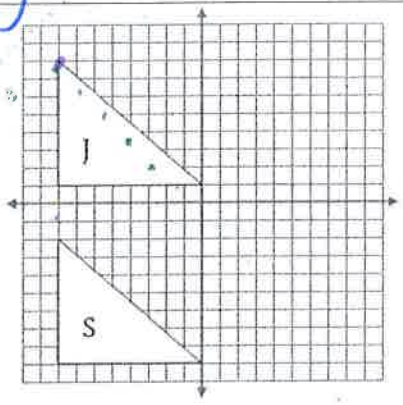
Math II Study Guide 1 Key

Name _____ Date _____ Period _____

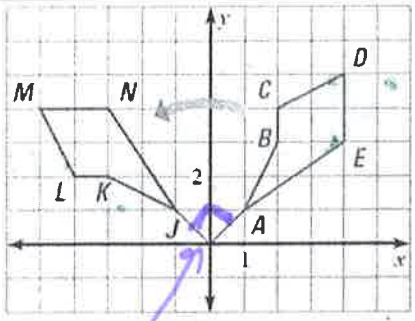
What type of transformation is shown in each figure?



Type of Transformation?
Reflection across the x-axis

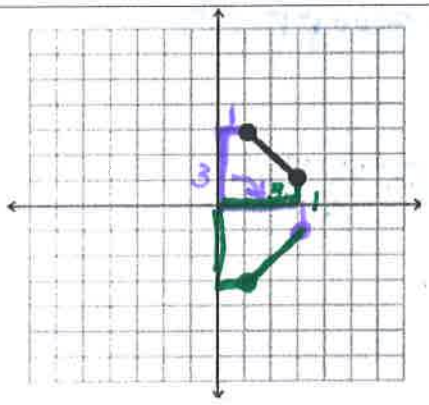


Type of transformation?
From J to S, a translation 11 units down $(x,y) \rightarrow (x, y-11)$

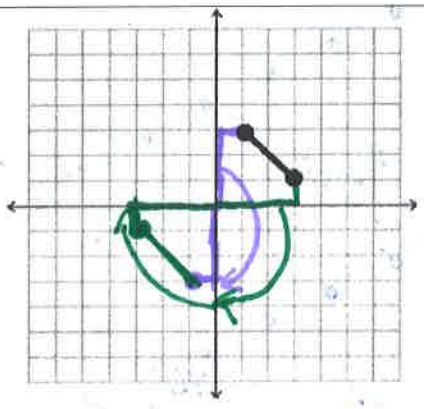


Type of transformation?
A 90° rotation counterclockwise

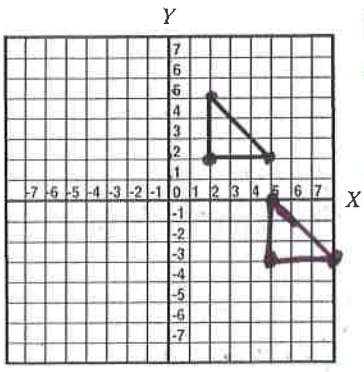
For each graph/figure shown, perform the required transformation.



Rotate the line segment 90 degrees clockwise about the origin.

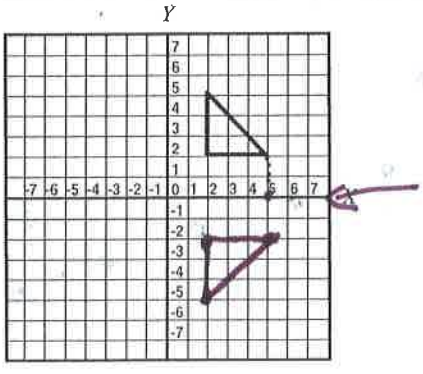


Rotate the line segment 180 degrees about the origin.

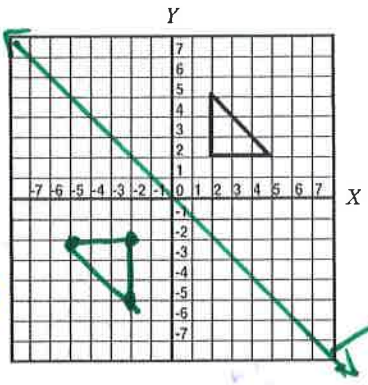


(2,2) (5,2) (2,5)
+3 -5 +3 -5 +3 -5
(5,-3) (8,-3) (5,0)

Translate the triangle according to the rule:
$(x, y) \rightarrow (x-3, y-5)$

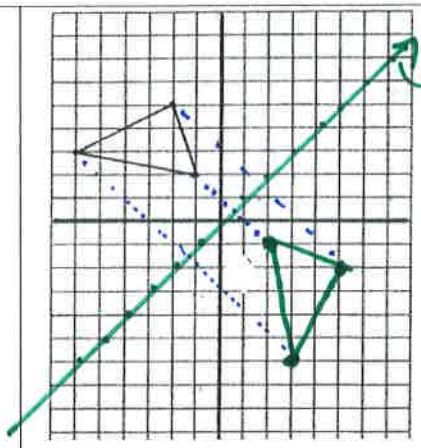


Reflect the triangle over the x axis



$y = -x$

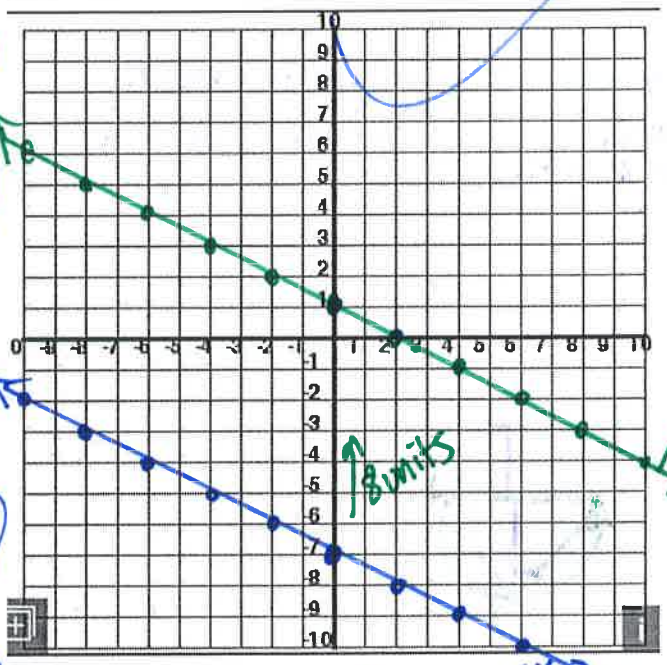
Reflect the triangle over the line y = -x.



$y = x$

notice the blue dashed lines are perpendicular to the reflection line.

Reflect the triangle across the line y = x.



Graph the function on the coordinate plane.

$k(x) = -\frac{1}{2}x - 7$

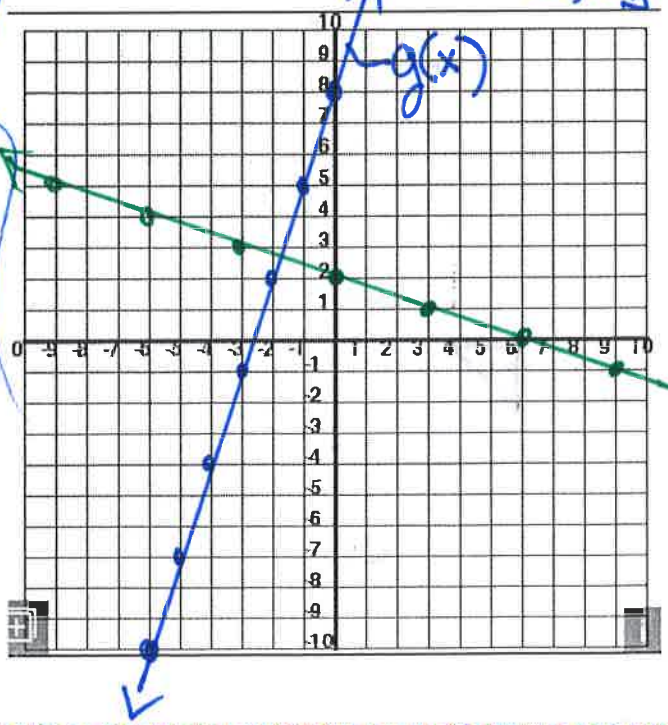
Key

Graph a line parallel to this line, but translate the line up 8 units. Label this line p(x).

2 means same slope or steepness

Write the equation for p(x) in slope-intercept form.

$p(x) = -\frac{1}{2}x + 1$



Graph the function on the coordinate plane.

$g(h) = 3x + 8$

Graph a line perpendicular to this line anywhere on the coordinate plane

means slope is negative reciprocal

$3 \rightarrow -\frac{1}{3}$

Write the equation for your line.

$h(x) = -\frac{1}{3}x + 2$

I just chose 2 as a y-intercept randomly.