Ready, Set, Go!

Ready

Topic: Basic Rotations and Reflections of objects

In each problem there will be a preimage and several images based on the give preimage. Determine which of the images are rotations of the given preimage and which of them are reflections of the preimage. If an image appears to be created as the result of a rotation and a reflection then state both.

1.

Pre-Image   Image A   Image B   Image C   Image D

2.

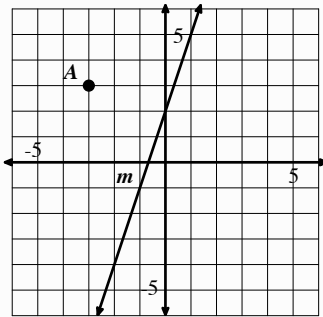Image B

Image D

Pre-Image   Image A

Image C

Set

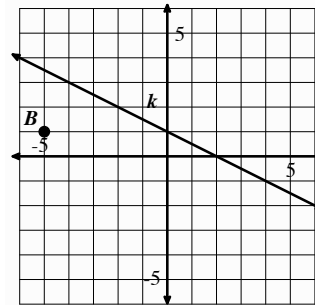Topic: Reflecting and Rotating points

On each of the coordinate grids there is a labeled point and line. Use the line as a line of reflection to reflect the given point and create its reflected image over the line of reflection.
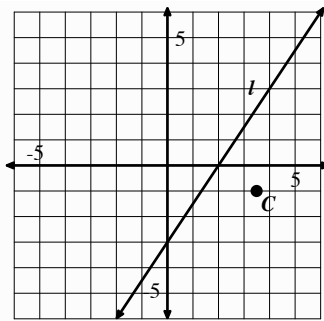
3.

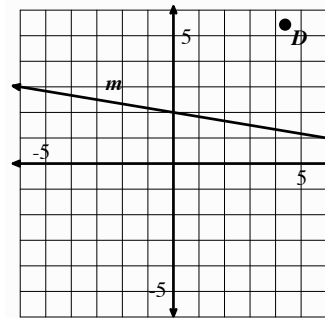Reflect point **A** over line **m** and label the image **A'**

4.

Reflect point **B** over line **k** and label the image **B'**

5.

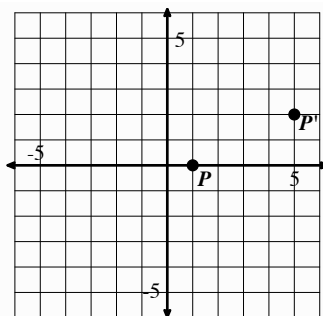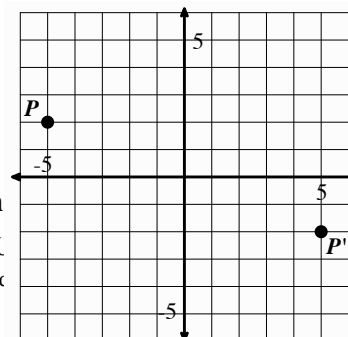Reflect point **C** over line **l** and label the image **C'**

6.

Reflect point **D** over line **m** and label the image **D'**

For each pair of point, *P* and *P'* draw in the line of reflection that would need to be used to reflect *P* onto *P'*. Then find the equation of the line of reflection.
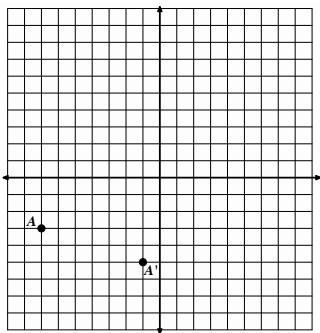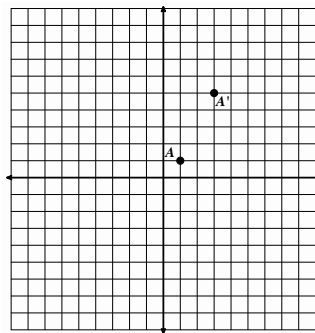
7.

8.

For each pair of point, *A* and *A'* draw in the line of reflection that would need to be used to reflect *A* onto *A'*. Then find the equation of the line of reflection. Also, draw a line connecting *A* to *A'* and find the equation of this line. Compare the slopes of the lines of reflection containing *A* and *A'*.

9.

10.

Go

Topic: Slopes of parallel and perpendicular lines and finding both distance and slope between two points.

For each linear equation write the slope of a line parallel to the given line.

11. $y = -3x + 5$ 12. $y = 7x - 3$ 13. $3x - 2y = 8$

For each linear equation write the slope of a line perpendicular to the given line.

14. $y = -\frac{2}{7}x + 5$ 15. $y = \frac{1}{5}x - 4$ 16. $3x + 5y = -15$

Find the *slope* between each pair of points. Then, using the Pythagorean Theorem, find the *distance* between each pair of points. You may use the graph to help you as needed.

17. (-2, -3) (1, 1)
a. Slope: b. Distance:

18. (-7, 5) (-2, -7)
a. Slope: b. Distance

19. (2, -4) (3, 0)
a. Slope: b. Distance: