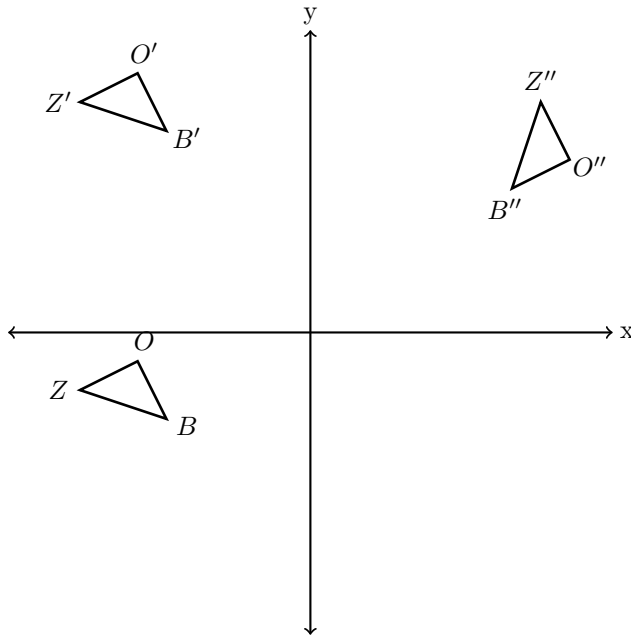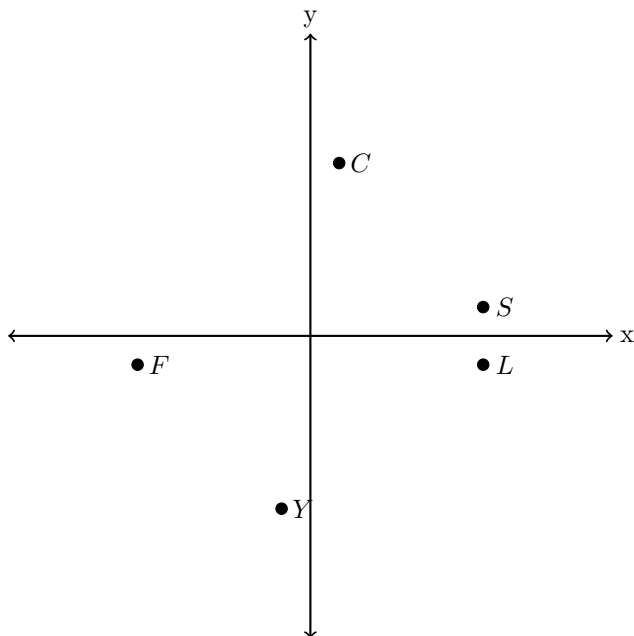1. In the graph below, $\triangle ZOB$ follows a sequence of transformations to make $\triangle Z''O''B''$.

What is the sequence of tranformations?

(1) Reflection then rotation

(2) Reflection then reflection

(3) Translation then rotation

(4) Translation then reflection

(5) I do not know. (Worth $\frac{1}{3}$ points)

2. In the graph below, there are several points plotted.

After point L is rotated 90° clockwise around the origin, which point is its image?
(1) Y

(2) S

(3) F

(4) C

(5) I do not know. (Worth $\frac{1}{3}$ points)

3. Given $\triangle ICH$, after which of the following transformations, will $\triangle ICH$ *not* be congruent to $\triangle I'C'H'$?
(1) A translation 2 right and 8 up

(2) A dilation with a scale factor of 5

(3) A rotation 180°counterclockwise around the point $(2, -4)$

(4) A reflection over the line $y = -9$

(5) I do not know. (Worth $\frac{1}{3}$ points)

4. In the diagram below square $AKWN$ is drawn.
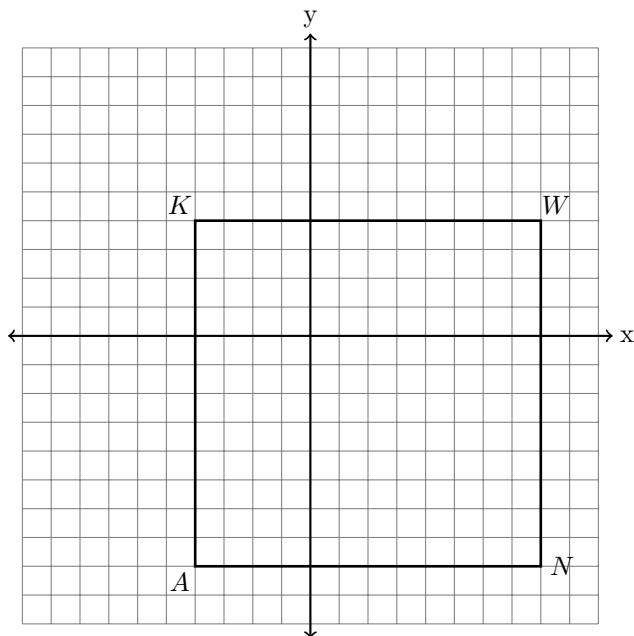
Which of the following will *not* map the square onto itself?

(1) $y = -2$

(2) $x = -2$

(3) $y = x - 4$

(4) Rotation 90° around (2,-2)

(5) I do not know. (Worth $\frac{1}{3}$ points)

5. Which shape always has exactly 5 lines of reflection that will map it onto itself?

(1) regular pentagon

(2) regular hexagon

(3) regular octagon

(4) regular nonagon

(5) I do not know. (Worth $\frac{1}{3}$ points)

6. What is the minimum number of degrees for a regular pentagon to rotate onto itself?
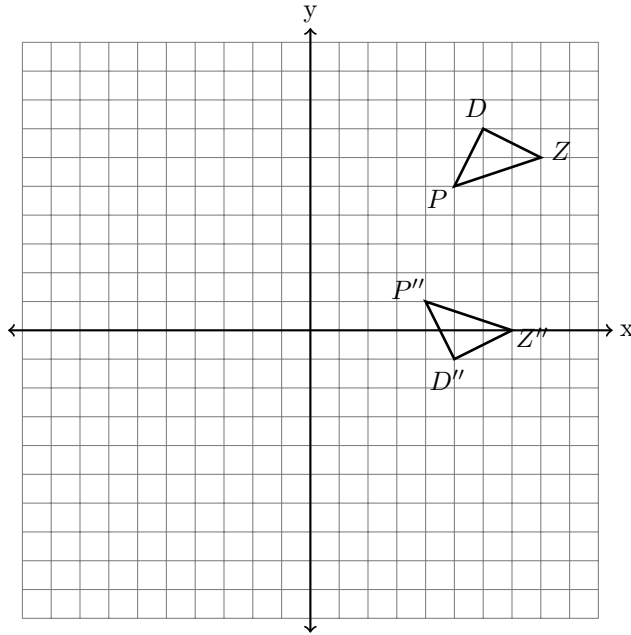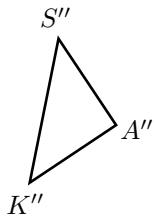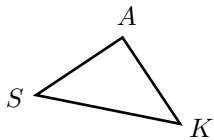
(1) 120°

(2) 45°

(3) 40°

(4) 72°

(5) I do not know. (Worth $\frac{1}{3}$ points)

7. Given the graph below, identify the sequence of transformations used to map $\triangle PDZ$ onto $\triangle P''D''Z''$.
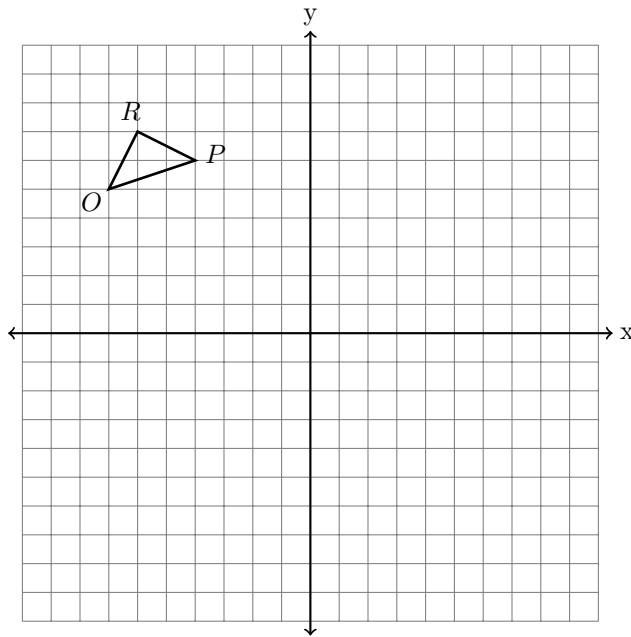

Explain why $\triangle PDZ$ is congruent to $\triangle P''D''Z''$.

8. Below, $\triangle SAK$ follows a sequence of transformations to make $\triangle S''A''K''$.

Describe a sequence of transformations that will map $\triangle SAK$ onto $\triangle S''A''K''$.

9. Given $\triangle ORP$ on the set of axes below, graph $\triangle O'R'P'$ after a rotation of 90° clockwise around the origin.

10. In the graph below of $\triangle KXI$, peform a translation left 10 followed by a reflection over the line $y = 0$ to make $\triangle K''X''I''$.