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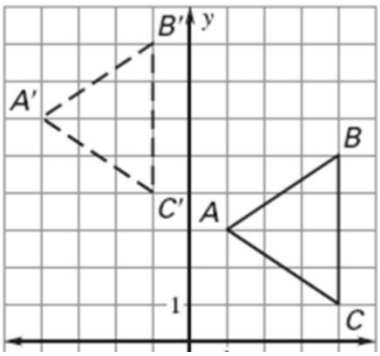
Geometry, Unit 2: Transformations

Study Guide – Sample Problems

Note that this is NOT a comprehensive study guide, but it does touch on most of the concepts for the test. For further practice, make sure you understand and can do all of your worksheets and our example problems from class

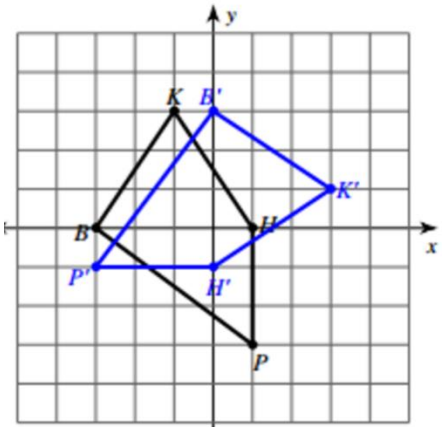
1. Does the shape have rotational symmetry? If so, what are the degrees of rotation?

2. Write a rule for the translation. Then <u>verify</u> your answer mathematically.



3. Find the image of the points A(3, -2) and B(-7,-3) after a reflection over the line y=-x. <u>Verify</u> your answer.

4. Describe the transformation that maps the pre-image onto the image.



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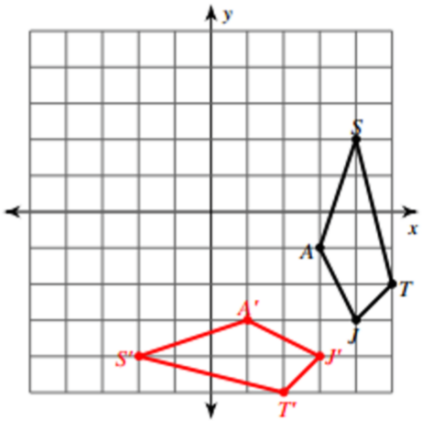
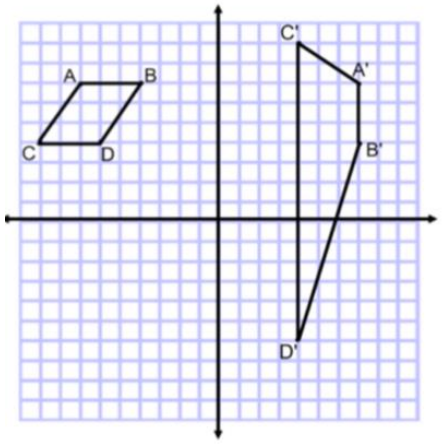
5. What is the image of the points A(3,5) and B(-1,-4) after a 90 degree rotation about the origin? Verify your answer.

6. Describe the transformation that maps the pre-image onto the image.



7. Write a rule for the translation: 4 units left and 5 units up.

8. Alex was trying to rotate the quadrilateral 270 degrees. What makes it obvious that a mistake has been made? After answering, do the rotation correctly.



9. What are the degrees of rotation of a regular decagon? (It has 10 sides)

10. Given the rule $(x, y) \rightarrow (x + 3, y - 1)$, what is the image of B(-1, 7)? What is the preimage of A'(3,-4)? Verify both answers.