Name _____ Geometry Unit 1 Review for TEST

Your test has 25 multiple choice questions.

4 translations

6 Reflections

4 Rotations

3 Rotational and reflectional symmetry

3 dilations

3 composition of transformations

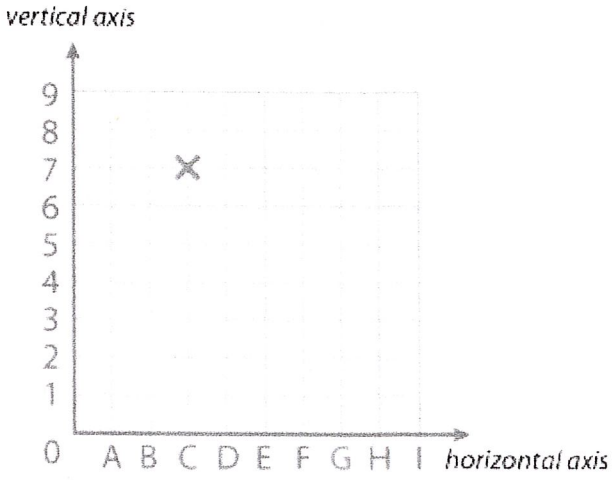
2 other

*you **must** be able to plot points and read the ordered pairs from a graph

Also study your quiz and quiz review!

Translation Review

1. You are located at H4. You want to reach the X. Which translation will help you?



A. left 6 up 4

B. left 6 down 3

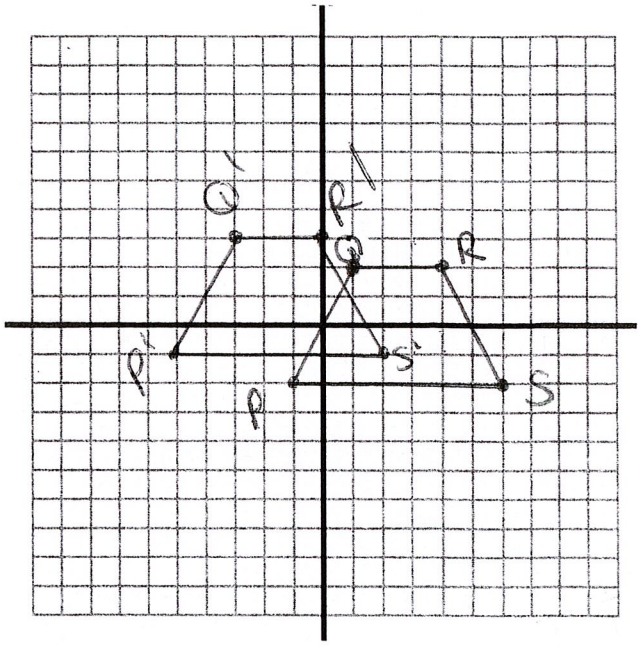
C. left 3 up 5

D. right 1 up 2

E. left 5 up 3

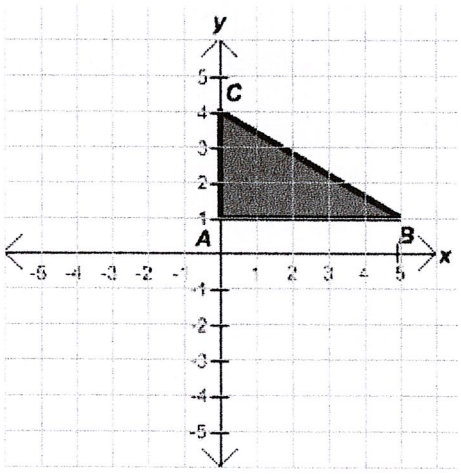
2. A (3, 2) B (4, 6) C (6, 0) if this triangle is translated $\langle -4, -3 \rangle$ what are the coordinates of B'? _____ (you can use graph paper for help!)

3. Write a rule to describe the translation:

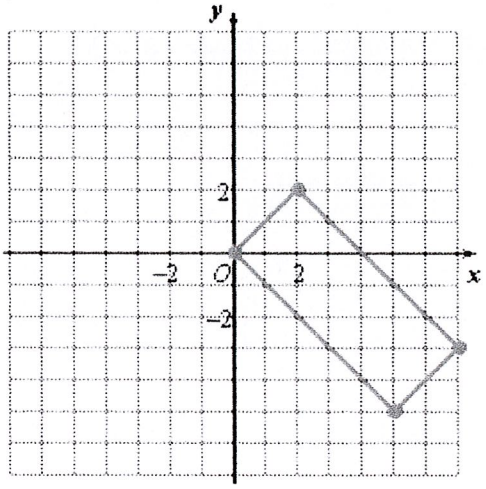


Reflection Review

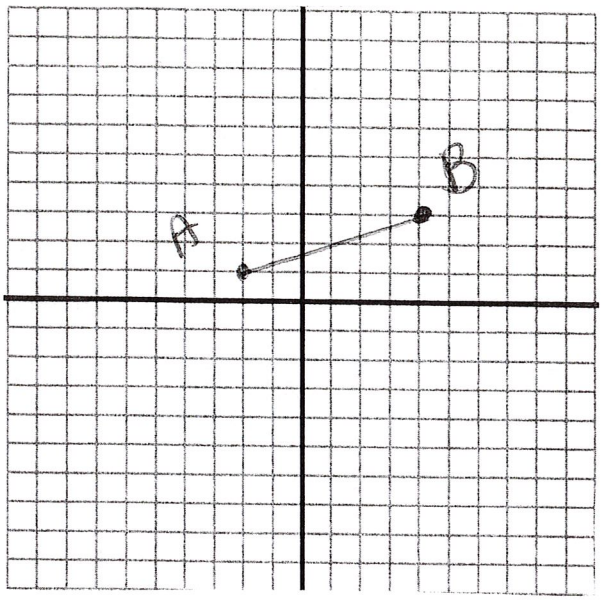
4. reflect over the x-axis



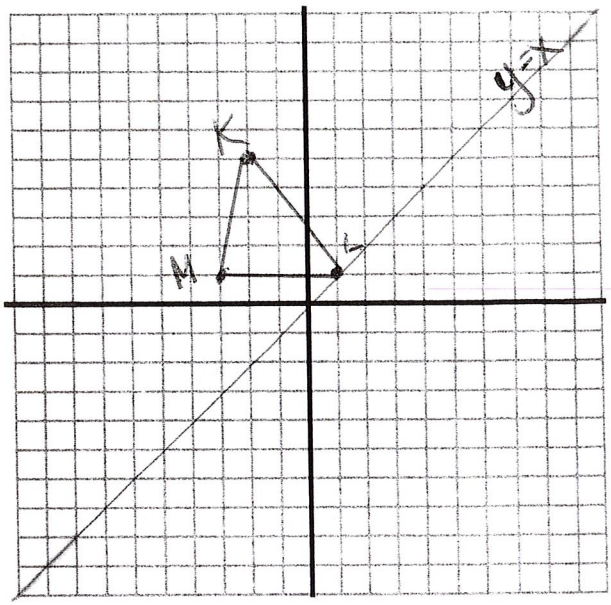
5. Reflect over the x-axis



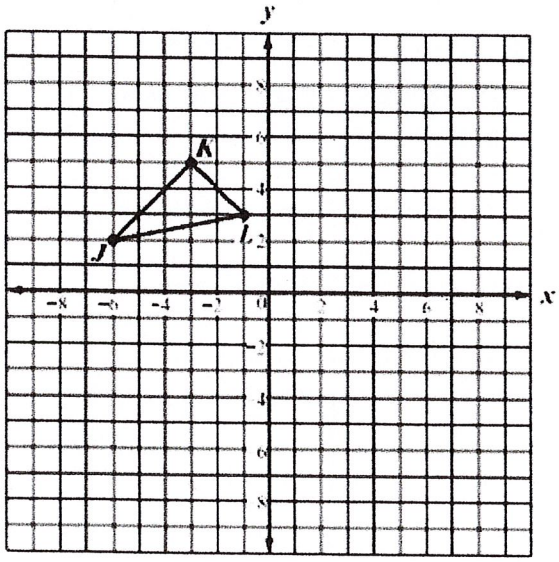
6. reflect over the x-axis



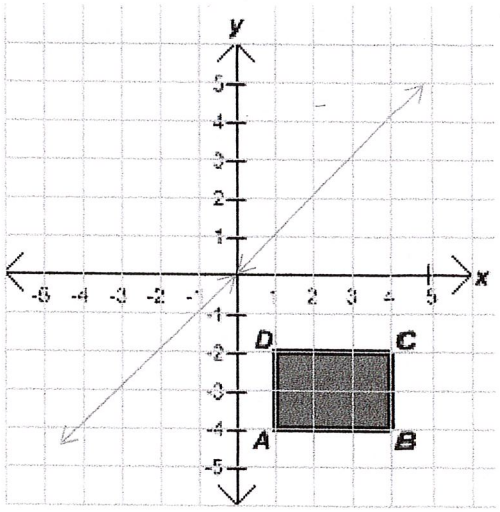
7. Reflect over the line y = x



8. reflect over the y-axis

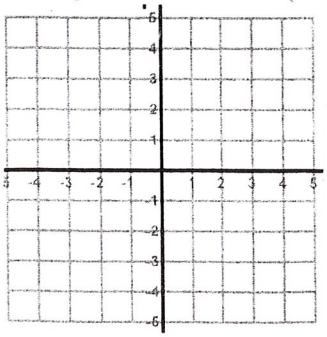


9. Reflect over the line y = x

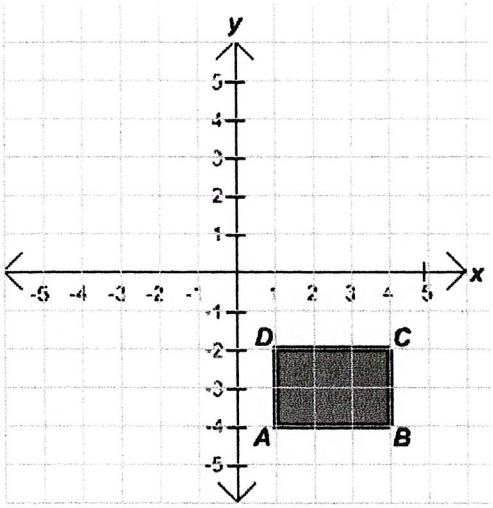


Rotation Review

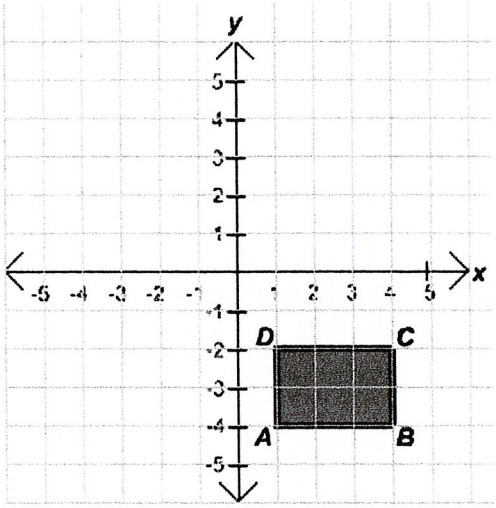
10. if you rotate A (-3, 5) 180° about the origin, where will A' be?_____



11. rotate 270° counterclockwise about origin

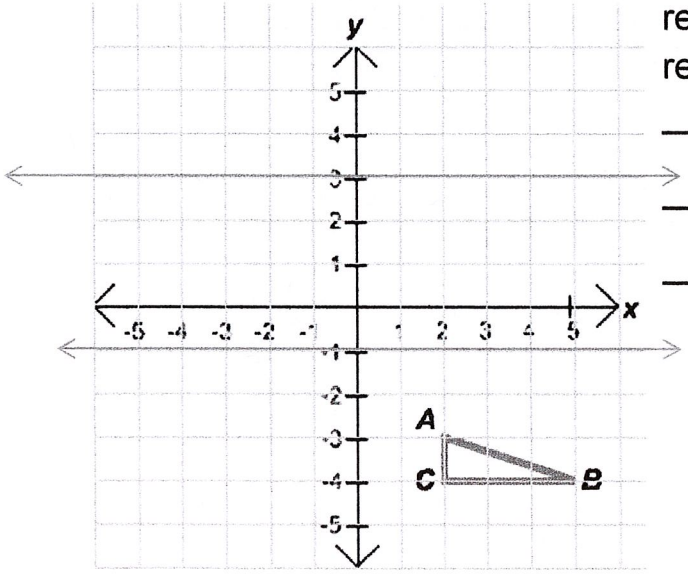


12. Rotate 90° counterclockwise about origin



Composition Review

13. First reflect the triangle over y = -1 and then y = 3. What single transformation could have produced the same result? What is the relationship between the slide and the reflection lines?



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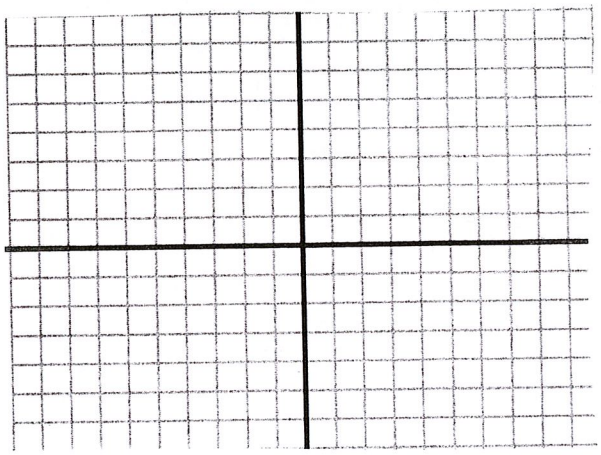


14. Take point A at (-3, 6). First reflect it over the x-axis and then slide it right 5 and up 2. What are its coordinates?_____

15. Take point A (3, 5) and rotate it 90° counterclockwise about the origin. Then translate it 2 right and up 1. What are the new coordinates?

_____

16. A point is rotated 270° counterclockwise about the origin, and then translated left 3 up 2. Its final coordinates are (-3, 4). What were the **original** coordinates? (Think – how is this problem different from #25?)

_____

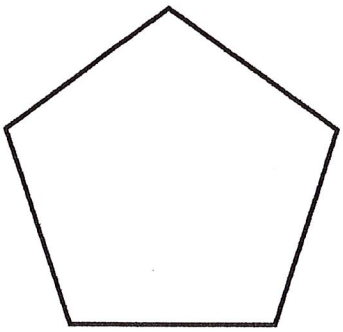
17. Take point A at (3, -4). Slide it 2 units up and then rotate it 180°. What are the new coordinates? _____

18. In the coordinate plane point A is located at (4, -5). It is rotated 90° counterclockwise about the origin to get A'. Then A' is slid 4 units left. Where is A"? _____

Reflectional and Rotational Symmetry

For each shape, name the number of lines of reflection (these are the lines that would take the shape onto itself), and the angle of rotational symmetry

19.



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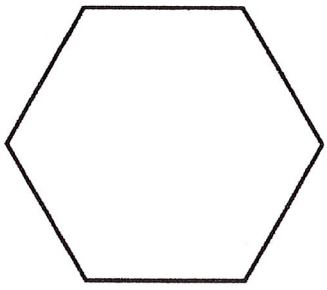
20.



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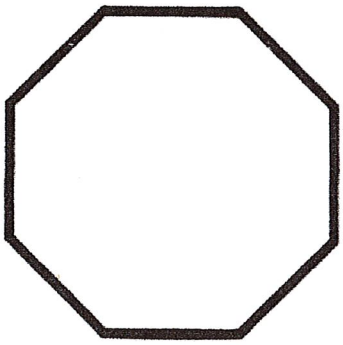
21.



_____

_____

22. Name all possible angles of rotation for each polygon:

Pentagon _____

Hexagon _____

Octagon_____

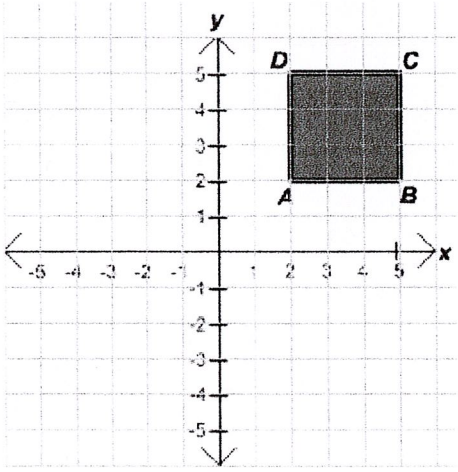
23. What does it mean for "a figure to be transformed onto itself?"

_____

_____

_____

Can you come up with a transformation or a combination of transformations to carry this figure onto itself?



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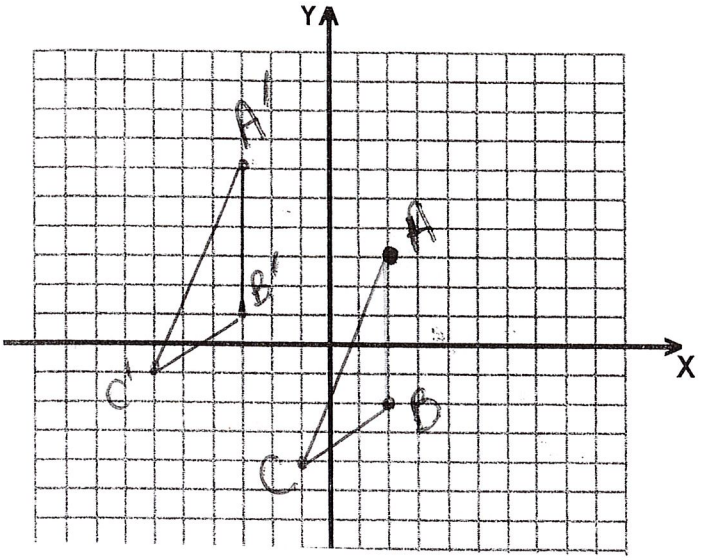
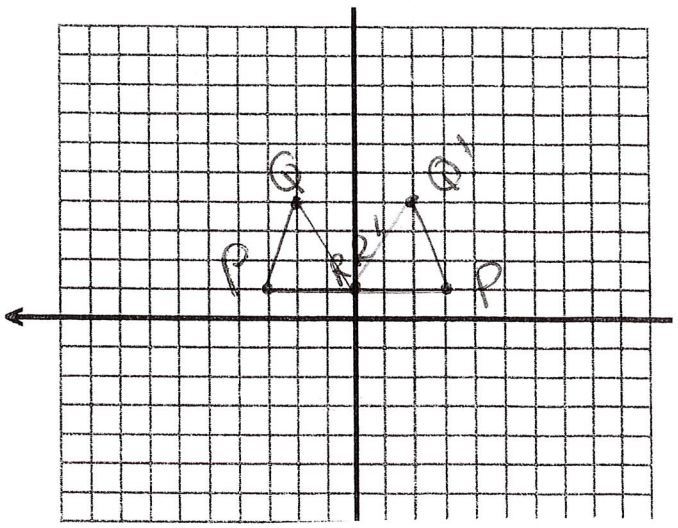
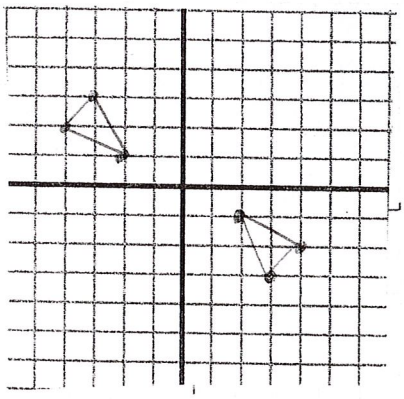
24. Name the transformation:



25. Name the transformation:



26. Name the transformation:



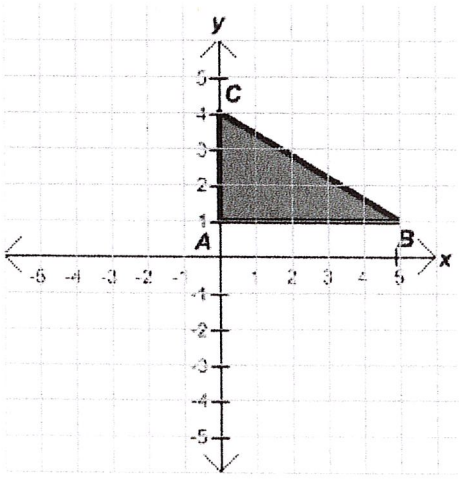
27. Describe what happens to the sides, angles, and orientation of a shape when it is dilated: _____

_____

_____

_____

28. What are the new coordinates if the image has a dilation of $\frac{1}{4}$ with center (0,0)



29. Square ABCD is going to undergo a dilation of 3 with **center C** (or center (5, 5) .

What is the length of C'B'? _____

What is the length of C'D'? _____