Lesson 5

READY, SET, GO! Name Key Period Date

READY

Topic: Polygons, definition and names

1. What is a polygon? Describe in your own words what a polygon is.

2. Fill in the names of each polygon based on the number of sides the polygon has.

Number of Sides	Name of Polygon
3	Triangle
4	Quadrilateral
5	Pentagon
6	hexagon
7	heptagon
8	octagon
9	nonagon
10	decagon

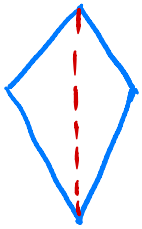
SET

Topic: Kites, Lines of symmetry and diagonals.

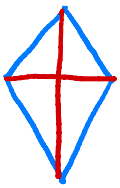
3. One quadrilateral with special attributes is a kite. Find the geometric definition of a kite and write it below along with a sketch. (You can do this fairly quickly by doing a search online.)

4. Draw a kite and draw all of the lines of reflective symmetry and all of the diagonals.

1 **Lines of Reflective Symmetry**



2 **Diagonals**



5. List all of the rotational symmetry for a kite.

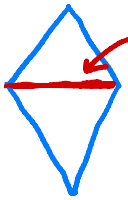
No rotational symmetry

6. Are lines of symmetry also diagonals in a polygon? Explain.

1 line of symmetry is also a diagonal.

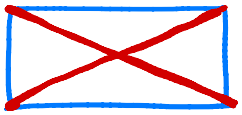
6. Are all diagonals also lines of symmetry in a polygon? Explain.

no

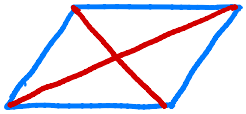


diagonal is not a line of symmetry.

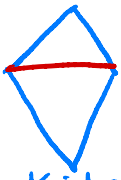
7. Which quadrilaterals have diagonals that are not lines of symmetry? Name some and draw them.



rectangle

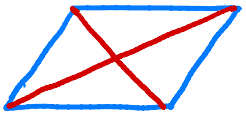


parallelogram



Kite

8. Do parallelograms have diagonals that are lines of symmetry? If so, draw and explain. If not draw and explain.



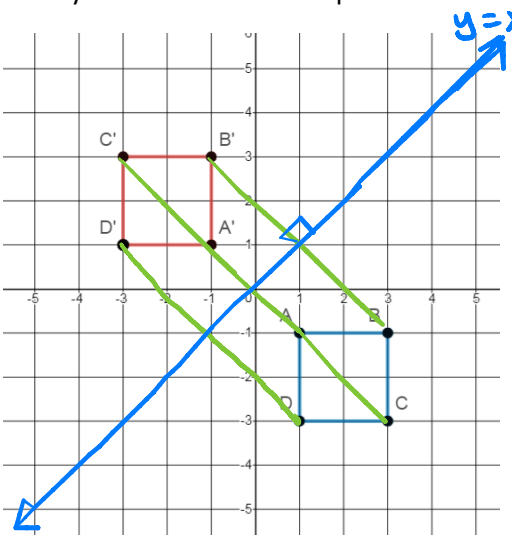
parallelogram

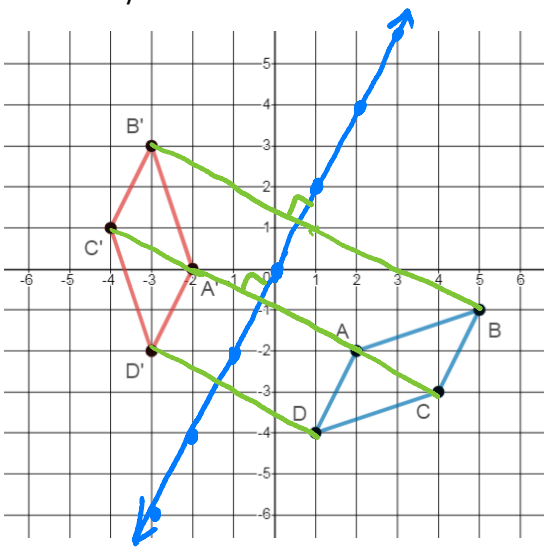
Lesson 5

GO

Topic: Justifying and Matching Transformations.

Justify how you know that the shape has been reflected accurately across the line of reflection.

9. 

10. 

Reflected across the line $y = x$

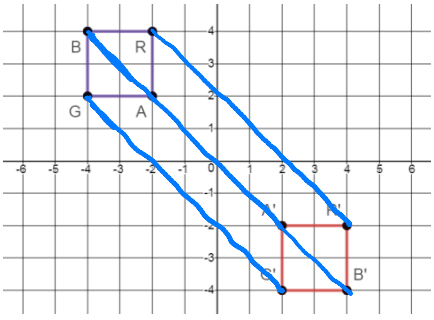
Corresponding points are connected by parallel lines perpendicularly bisected by y=x

Reflected across the line $y = 2x$

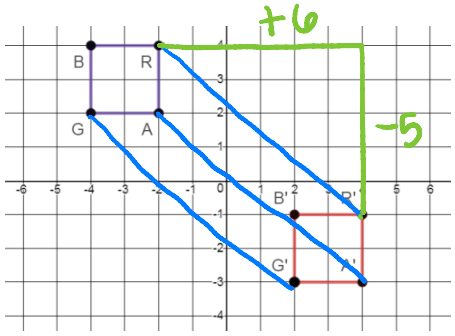
Corresponding points are connected by parallel lines perpendicularly bisected by y=2x

Match the following transformations with the pictures below.

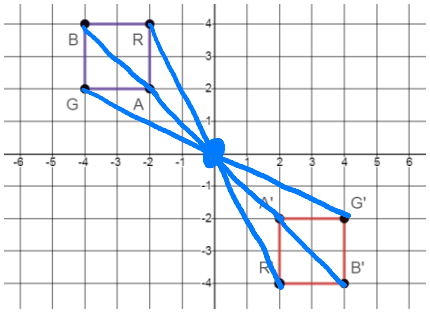
11. B



12. C



13. A



A. 180° Rotation CCW around the origin.

B. Reflection over the line y = x

C. Translation $f(x, y) = (x + 6, y - 5)$

Connect the corresponding points