**Geometry Local Lomac 2015-2016** **Date** 2/12 **due** 2/22 | **Circles and Lines of Reflection** **9.3L**

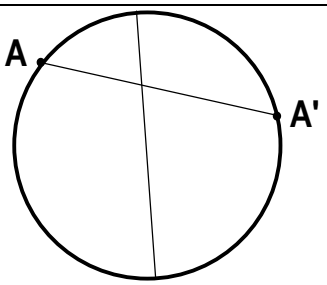
**Name** _____ **Per**_____

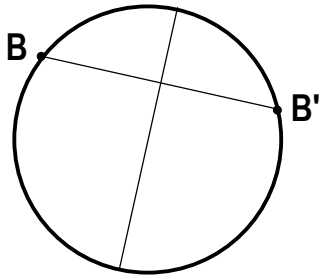
**LO:** I can construct a line of reflection between an image and its preimage and formally define **reflection**.

☐ **DO NOW** On the back of this packet

☐ (1) paper circle 9.2 **Revisiting Circles from lesson 9.2:**

☐ (a) For the circles at right, each has a segment connecting a preimage point to an image point and a diameter of the circle. Which diagram is showing the line of reflection, AA' or BB'? How do you know? _____

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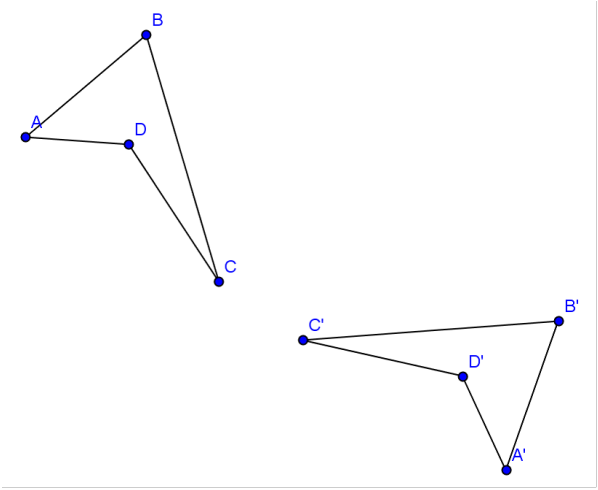
☐ (2) N10 **Reflections notes** Complete the reflection notes on page N10

**r** _____**(**_____**)**

☐ (3) **Reflections by definition**

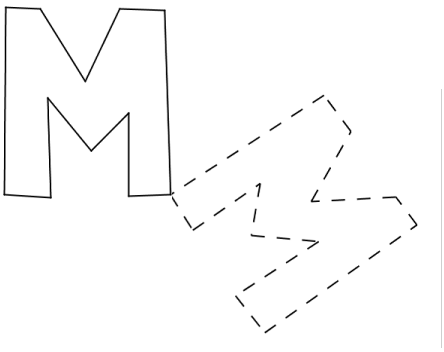
(a) ☐ Below is figure ABCD and its reflection. From the notes, we know that the line of reflection is the _____ _____ of the segment that joins a preimage to its image. Use this to construct the line of reflection for ABCD and A'B'C'D'. Label the line *q*.



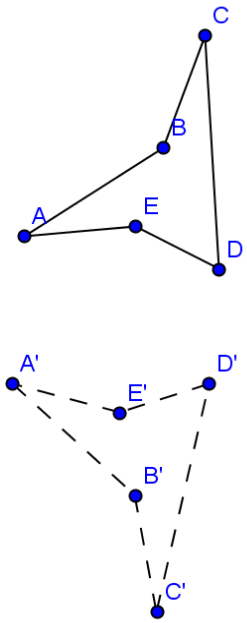

(b) ☐ Choose any point on the perpendicular bisector you constructed and label it P. Construct circle P with radius $\overline{PB}$. Draw $\overline{BB'}$. Is the diameter of circle P a segment of the perpendicular bisector (line of reflection) of $\overline{BB'}$? _____. Do points B and B' lie on circle P? _____ Write the reflection function: _____

☐ (4) **Constructing Lines of Reflection** Construct the line of reflection for each pair.

☐ (a)



☐ (b)




Write the reflection function: _____ Write the reflection function: _____

Choose any point on each perpendicular bisector you constructed and label it P. Construct circle P so that it passes through a point on the preimage. Does the circle also pass through the corresponding point on the image?

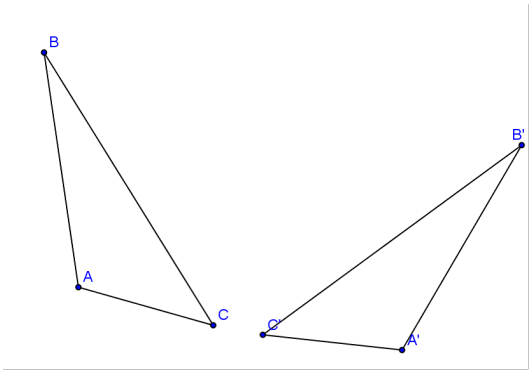
(a) _____ (b) _____ because _____

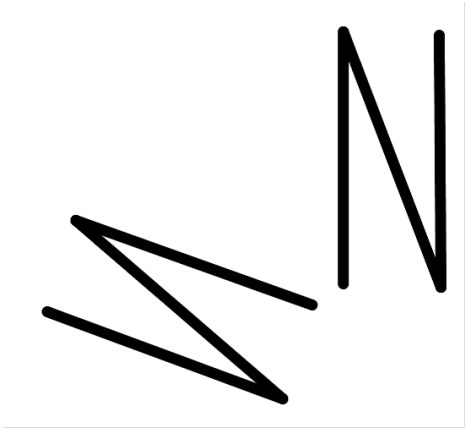
☐ (5) **Exit Ticket**

ON THE LAST PAGE

☐ (6 ) **Homework**

☐ (1) Construct the line of reflection for each figure..



☐ (2) Choose any point on each perpendicular bisector you constructed and label it P. Construct circle P so that it passes through a point on the preimage. Does the circle also pass through the corresponding point on the image?

☐ (6) cont, compass highlighters

**Homework**

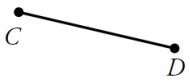
☐ (3) Draw points S, T, U, V, W, and X so that all are coplanar except for point X.

☐ (4) Draw acute angle CUB adjacent to right angle CUP.
(Remember: each letter can only be used once to represent one point in a diagram.)

☐ (5) Describe what it means when two or more points or figures "coincide".

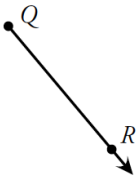
☐ (6) Name each geometric figure.
Use short notation except for #4.

**1.**




**2.**


**3.**



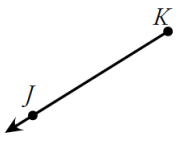

**4.**


**5.**


**6.**


**7.**


**8.**

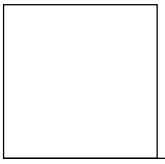


☐ (6) cont, compass highlighters

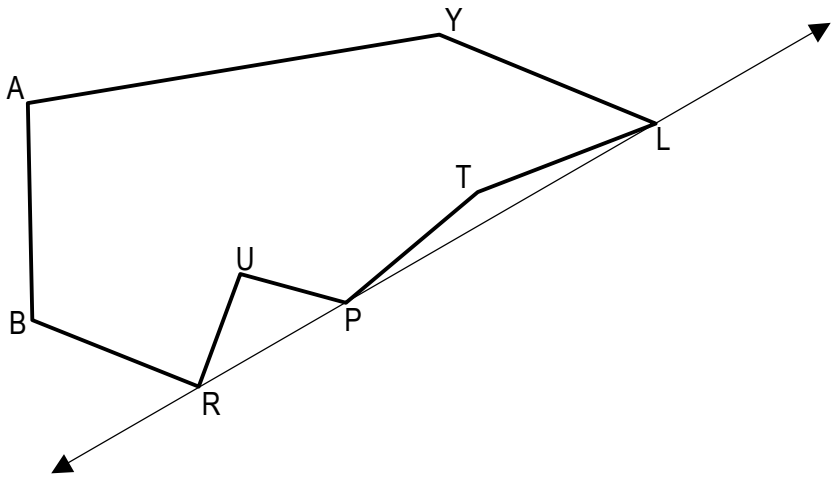
**Homework**

☐ (7) Construct an equilateral triangle with side lengths equal to twice the length of a side of this square:

(Use the extra segment length to help you determine a length equal to twice the length of a side of the square.)



☐ (7) Which points map to themselves when ABRUPTLY is reflected across line *m*? Explain why they map to themselves.



**Exit Ticket** **Name**_____ **Date** _____ _____ **Per**_ _____ **9.3L**

(1) The LO (Learning Outcomes) are written below your name on the front of this packet. Demonstrate your achievement of these outcomes by doing the following:

☐ (a) Draw any points Q and Q'. Construct the line of reflection that maps Q to Q' and label it *m*.

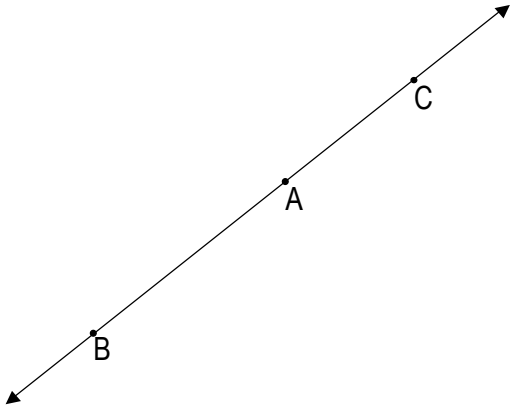
☐ (b) Write the function notation for the reflection you did in part (a). _____

☐ (b) Draw any point R on the line *m*. Describe where R' is located when point R is reflected across line *m*.

**DO NOW** **Name**_____ **Date** _____ **Per**_____ **9.3L**

(1) Which pair of figures shows a reflection, lightning, moon, or trapezoid? How do you know it is a reflection?

(2) Construct the perpendicular bisector of AC.




(3) What does “coincide” mean from your notes? What about this cartoon is supposed to make people smile?