Geometry Regents Lomac 2015-2016   Date 10/5   due 10/6   **Constructing Lines of Reflection** | 2.3R

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

Name _____

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

☐ **(1)**   **Revisiting Circles from lesson 2.2:**

paper circle 2.2

☐ (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? _____
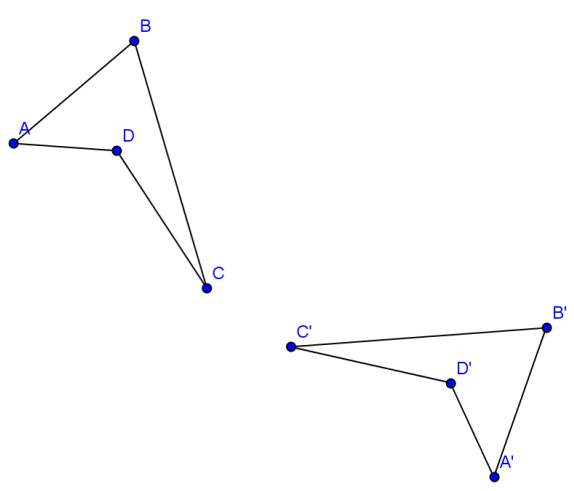
_____

_____

_____

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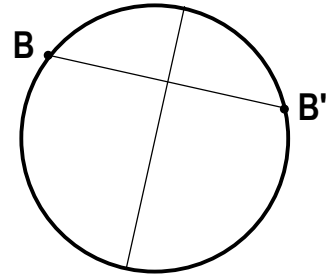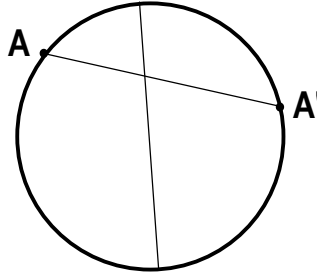
☐ **(2)**   **Reflections notes** Complete the reflection notes on page N10

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

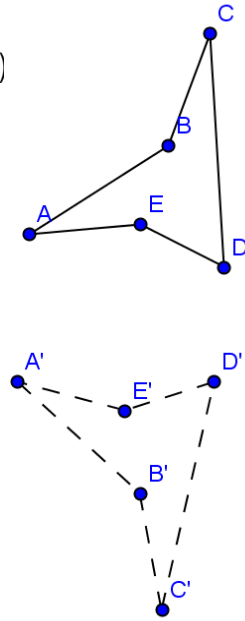construct the line of reflection for ABCD and A'B'C'D'. Label the line *q*.

(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.
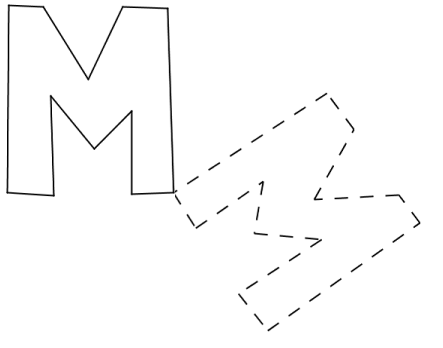
☐ (a)   ☐ (b)

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?
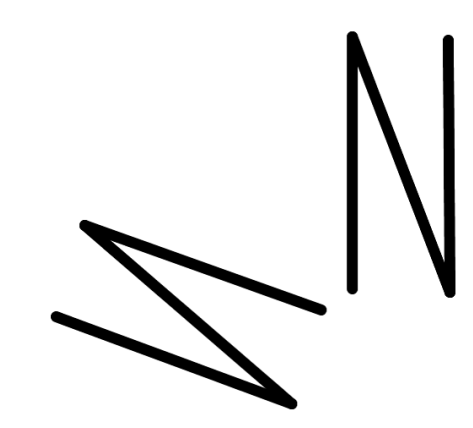
(a) _____   (b) _____   because _____

☐ (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?
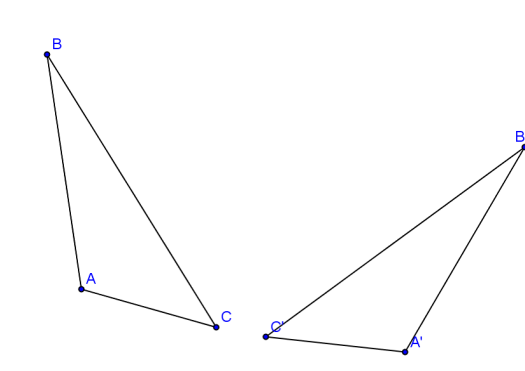
☐ (4) **Homework**
cont,
compass
highligh-
ters

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

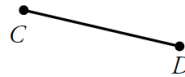☐ (4) Draw acute angle CUB adjacent to right angle CUP.

(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.
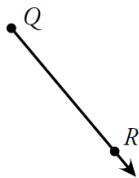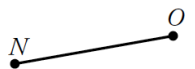Use short notation except for #4.

1.

C
D

2.

X
Y

3.

Q
R

4.

L

5.

N
O

6.

U
V

7.

H
I

8.
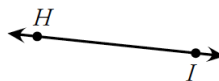
K
J

☐ (4)   **Homework**

cont,
compass
highligh-
ters

☐ (7) Construct a regular hexagon 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.)

Exit Ticket **Name**_____ **Date** _____ _____ **Per_** _____ **2.3R**

(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*.
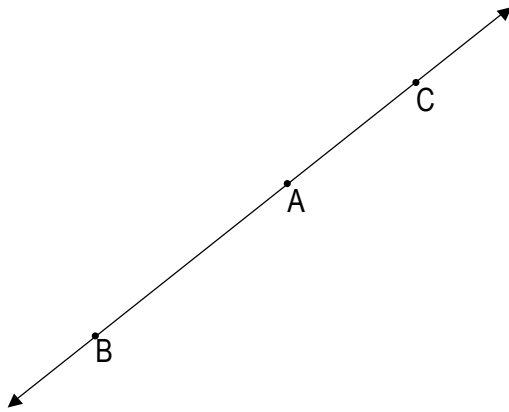
DO NOW   **Name**_____ **Date** _____ **Per**_____   **2.3R**

(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.

C

A

B

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

WHAT DOES COINCIDE MEAN?

IT'S WHAT YOU DO WHEN IT STARTS RAINING!

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