

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



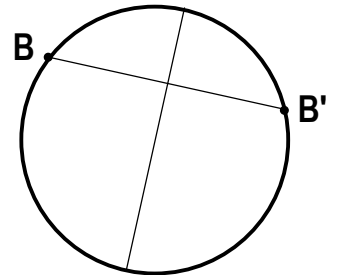
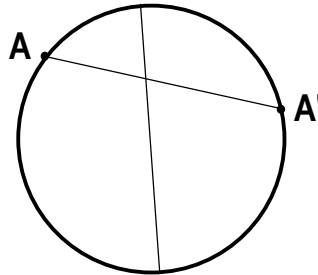
Name \_\_\_\_\_ Per \_\_\_\_\_

SLO: 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? \_\_\_\_\_



\_\_\_\_\_

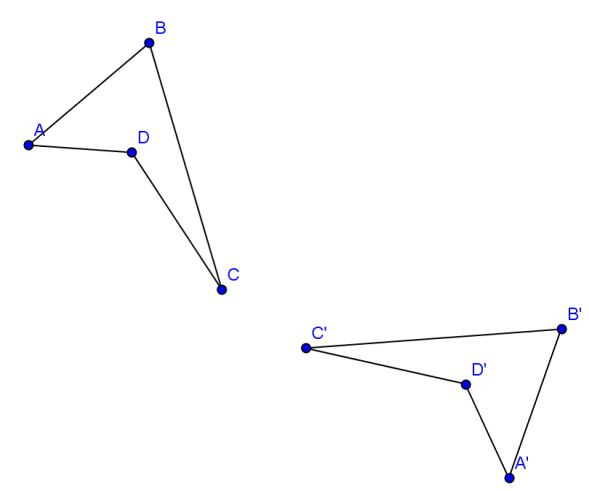
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(2) Reflections – Notes page N10: complete the notes for rigid motions and reflections

(3) Reflections by definition

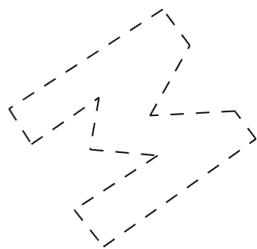
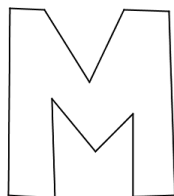
(a)  Below is figure ABCD and its reflection. From the notes, we know that the line of reflection is the \_\_\_\_\_ of the segment joining a preimage to its image. Use this to construct the line of reflection for ABCD and A'B'C'D'.



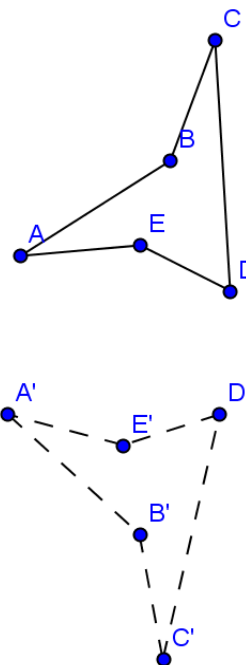
(b)  Choose any point on the perpendicular bisector you constructed and label it P. Construct circle P with radius  $\overline{PB}$ . Draw  $\overline{BB'}$ . Is the diameter of circle P a segment of the perpendicular bisector (line of reflection) of  $\overline{BB'}$ ? \_\_\_\_\_ Do points B and B'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

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

(a)



(b)



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 \_\_\_\_\_

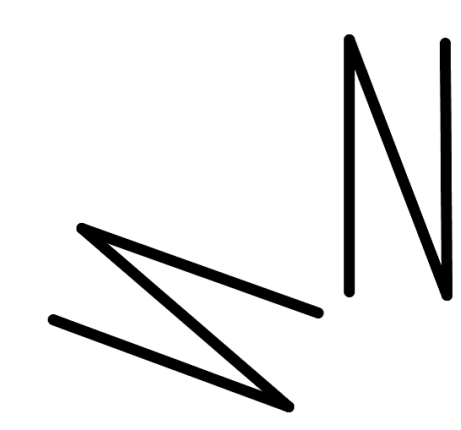
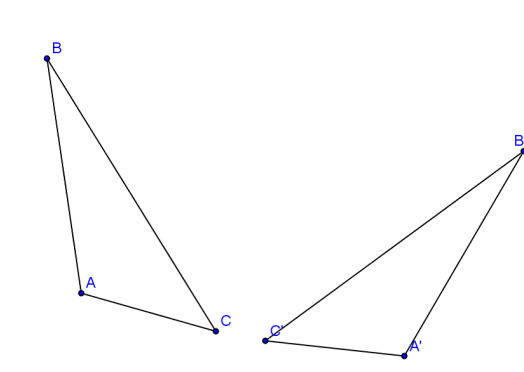
(5) **Exit Ticket**

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

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

(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?