

*Students will be able to:*

*Use distances between points to decide if two figures are congruent.*

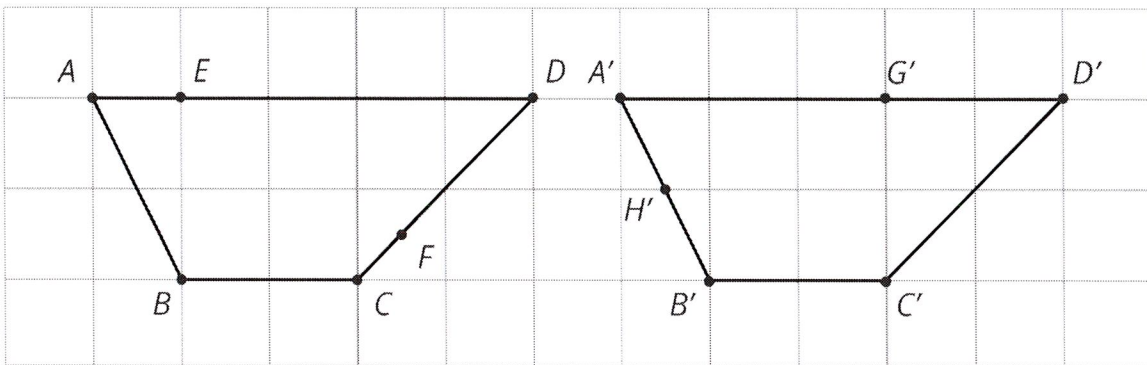
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Let's find ways to test congruence of interesting figures.

**Lesson 13.1: Not Just the Vertices**

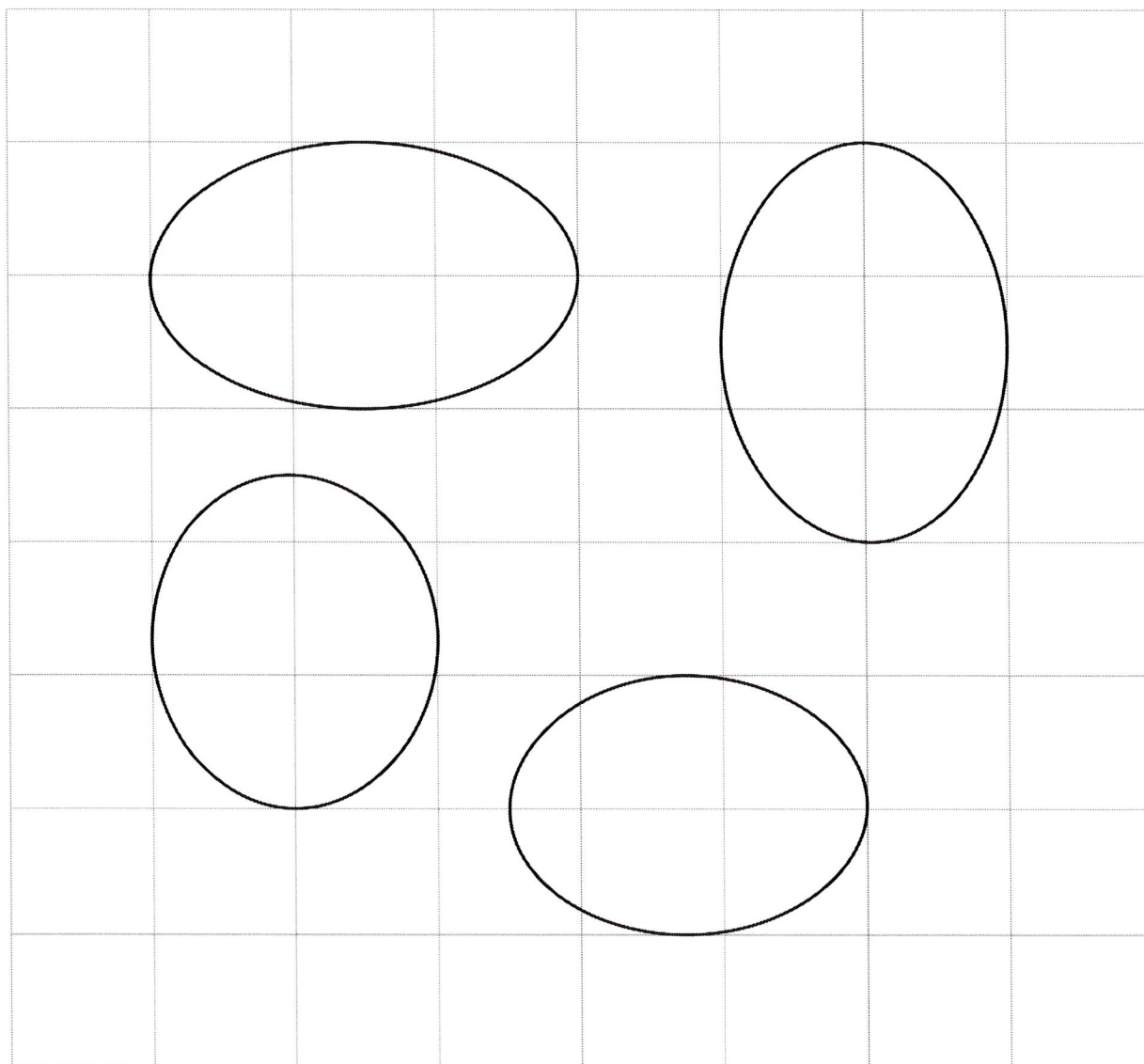
Trapezoids  $ABCD$  and  $A'B'C'D'$  are congruent.

- Draw and label the points on  $A'B'C'D'$  that correspond to  $E$  and  $F$ .
- Draw and label the points on  $ABCD$  that correspond to  $G'$  and  $H'$ .
- Draw and label at least three more pairs of corresponding points.



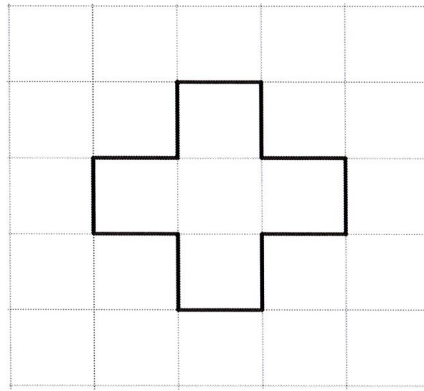
Lesson 13.2: Congruent Ovals

Are any of the ovals congruent to one another? Explain how you know.



Are you ready for more?

You can use 12 toothpicks to create a polygon with an area of five square toothpicks, like this:



Can you use exactly 12 toothpicks to create a polygon with an area of four square toothpicks?

Lesson 13.3: Corresponding Points in Congruent Figures

Here are two congruent shapes with some corresponding points labeled.

1. Draw the points corresponding to  $B$ ,  $D$ , and  $E$ , and label them  $B'$ ,  $D'$ , and  $E'$ .
2. Draw line segments  $AD$  and  $A'D'$  and measure them. Do the same for segments  $BC$  and  $B'C'$  and for segments  $AE$  and  $A'E'$ . What do you notice?
3. Do you think there could be a pair of corresponding segments with different lengths? Explain.

