

## Unit 2 Lesson 5 Summary

One important use of coordinates is to communicate geometric information precisely. Let's consider a quadrilateral  $ABCD$  in the coordinate plane. Performing a dilation of  $ABCD$  requires three vital pieces of information:

1. The coordinates of  $A$ ,  $B$ ,  $C$ , and  $D$
2. The coordinates of the center of dilation,  $P$
3. The scale factor of the dilation

\* The coordinate plane allows us to precisely locate a polygon & center of dilation.  
\* The order you connect to vertices in a polygon

With this information, we can dilate the vertices  $A$ ,  $B$ ,  $C$ , and  $D$  and then draw the corresponding segments to find the dilation of  $ABCD$ . Without coordinates, describing the location of the new points would likely require sharing a picture of the polygon and the center of dilation. <sup>does matter.</sup>

\* The coordinate plane allows use to use all numbers to do a dilation.

Connect  $A$  to  $B$  to  $C$   
to  $D$  to  $A$

