

## Do Now

1) What makes two figures congruent?

Same size  $\leftarrow$  equal angle measures  
 Same shape  $\leftarrow$  equal side measures

2) What is the scale factor if Point A is (15, 5) and Point A' is (3, 1)?

$$A(15, 5) \rightarrow A'(3, 1)$$

$$\frac{\text{Image}}{\text{Original}} = \frac{3}{15} = \frac{1}{5} \quad \boxed{K = \frac{1}{5}}$$

3) Name the transformation(s) that produce similar shapes

dilations

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- Congruent Polygons

- Translations - Slide

- > Right  $(x, y) \rightarrow (x + a, y)$
- > Left  $(x, y) \rightarrow (x - a, y)$
- > Up  $(x, y) \rightarrow (x, y + a)$
- > Down  $(x, y) \rightarrow (x, y - a)$

- Reflections

- > Over x-axis  $(x, y) \rightarrow (x, -y)$
- > Over y-axis  $(x, y) \rightarrow (-x, y)$

- Rotations

- > Counterclockwise  $270^\circ$   $(x, y) \rightarrow (y, -x)$
- > Counterclockwise  $90^\circ$   $(x, y) \rightarrow (-y, x)$
- > Counterclockwise  $180^\circ$   $(x, y) \rightarrow (-x, -y)$
- Clockwise  $180^\circ$

- Dilations

- > Multiply by the k factor

Test Topics

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