

2 EXAMPLE Determining If Figures Are Similar

Use the definition of similarity in terms of similarity transformations to determine whether the two figures are similar. Explain your answer.

- A** $\triangle JKL$ and $\triangle MNP$ have different angle measures.

Since similarity transformations preserve angle measure, there is no sequence of similarity transformations that will map $\triangle JKL$ to $\triangle MNP$.

Therefore, _____.

- B** You can map $\triangle RST$ to $\triangle XYZ$ by the dilation that has the coordinate notation

_____.

A dilation is a similarity transformation.

Therefore, _____.

- C** You can map $ABCD$ to $EFGH$ by the dilation that has the coordinate notation

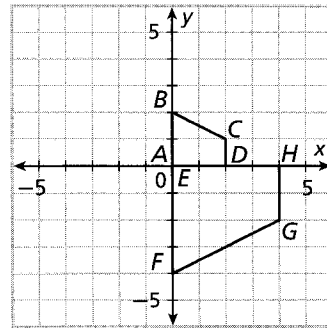
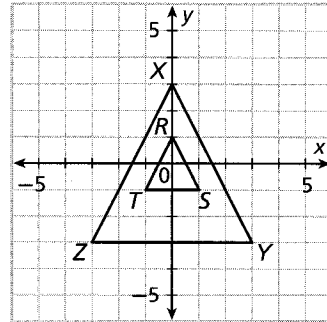
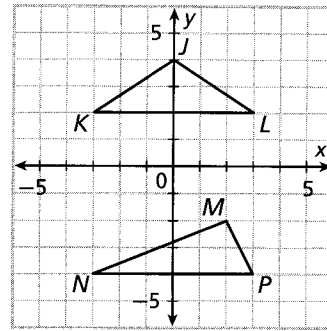
_____.

followed by the reflection that has the coordinate notation

_____.

Dilations and reflections are similarity transformations.

Therefore, _____.



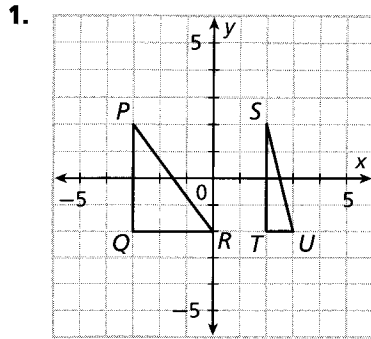
REFLECT

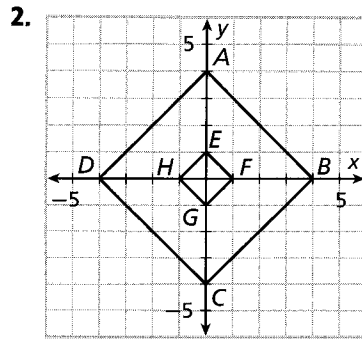
- 2a.** In Part B above, how can you show that the triangles are similar using a different similarity transformation?

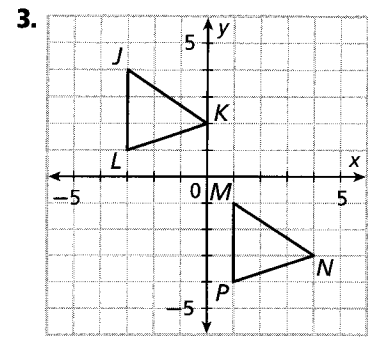
- 2b.** In Part C above, does the order in which you perform the similarity transformations matter? Explain.

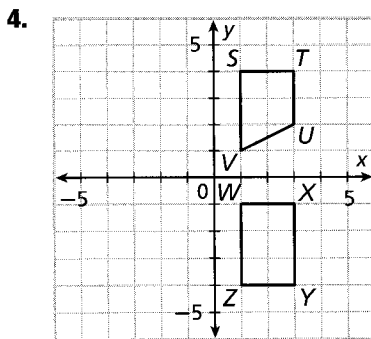
PRACTICE

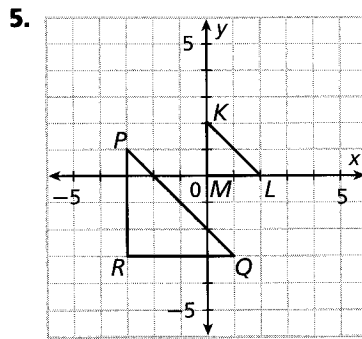
Determine if the two figures are similar. If so, write a similarity statement and identify the transformation in coordinate notation. If not, explain.

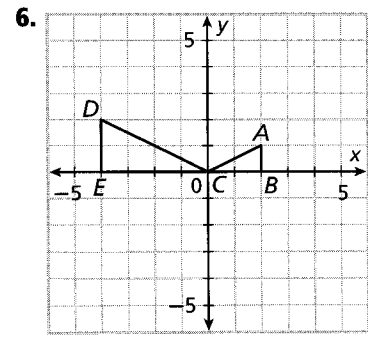












7. Given that $\triangle GMX \sim \triangle DPW$, write as many congruence statements as possible about the sides and/or angles of the triangles.
