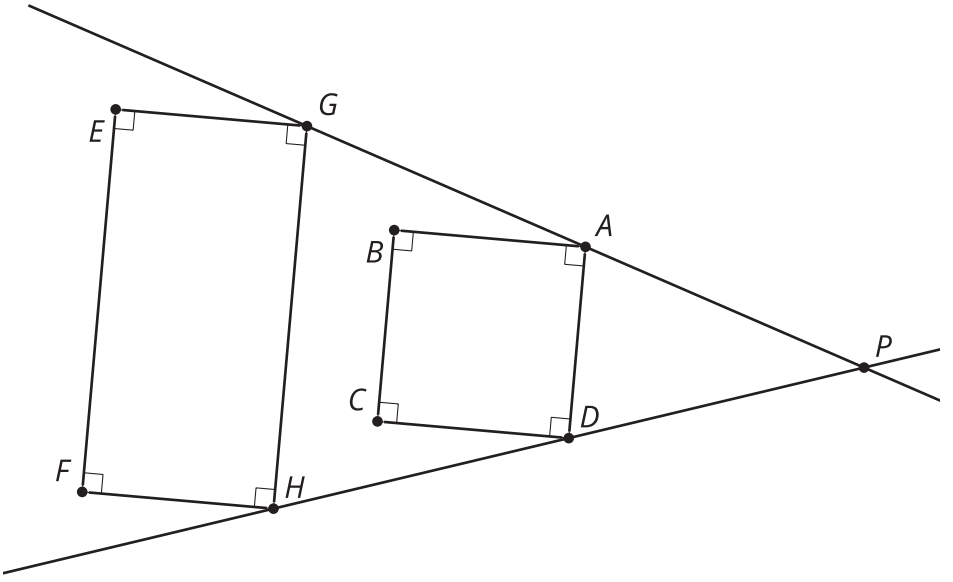
Unit 3 Lesson 6: Connecting Similarity and Transformations

1 Dilation Miscalculation (Warm up)

Student Task Statement



What's wrong with this dilation? Why is $GHFE$ not a dilation of $ADCB$?

2 Card Sort: Not-So-Rigid Transformations

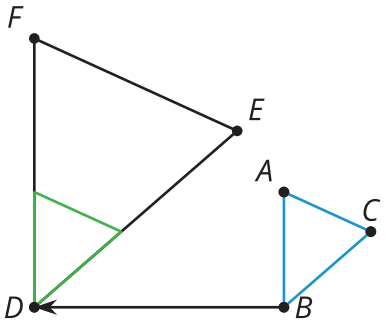
Student Task Statement

1. Your teacher will give you a set of cards. Sort the cards into categories of your choosing. Be prepared to explain the meaning of your categories.
2. Your teacher will assign you one card. Write the sequence of transformations (translation, rotation, reflection, dilation) to take one figure to the other.
3. For all the cards that could include a dilation, what scale factor is used to go from Figure F to Figure G? What scale factor is used to go from Figure G to Figure F?

3 Alphabet Soup

Images for Launch

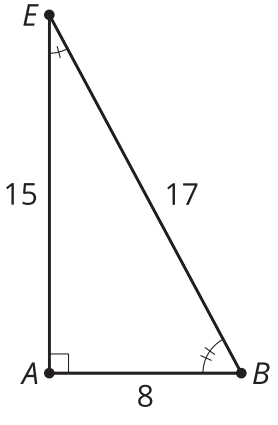
Translation and dilation takes $\triangle ABC$ onto $\triangle FDE$ so $\triangle ABC \sim \triangle FDE$

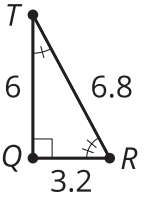


Student Task Statement

Are the triangles **similar**?

$\overline{AB} \parallel \overline{QR}, \overline{AB} \perp \overline{AE}, \overline{QR} \perp \overline{QT}$





1. Write a sequence of transformations (dilation, translation, rotation, reflection) to take one triangle to the other.
2. Write a similarity statement about the 2 figures, and explain how you know they are similar.
3. Compare your statement with your partner's statement. Is there more than one correct way to write a similarity statement? Is there a wrong way to write a similarity statement?

Images for Activity Synthesis

$JL = 2 \cdot PR$