

SIMILAR TRIANGLES

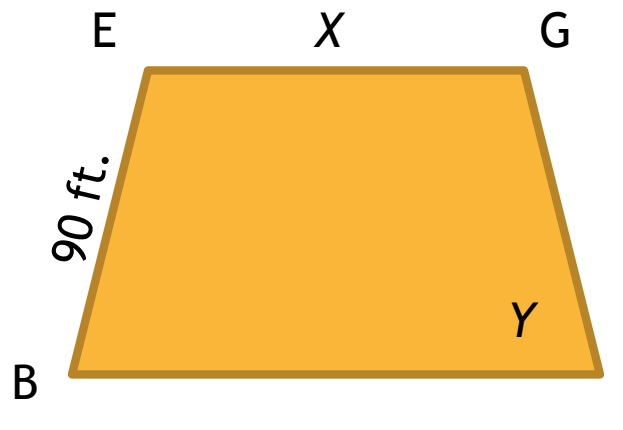
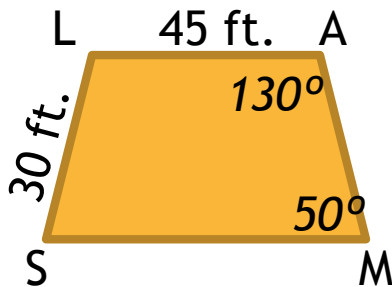
Mr. Kruczinski

SIMILAR POLYGONS -- REVIEW

- ◉ What are the properties of similar polygons?
 - They have congruent angles.
 - Their sides are proportional
- ◉ We can find missing measurement with similar polygons...

SMAL~BIGE

Find X and Y



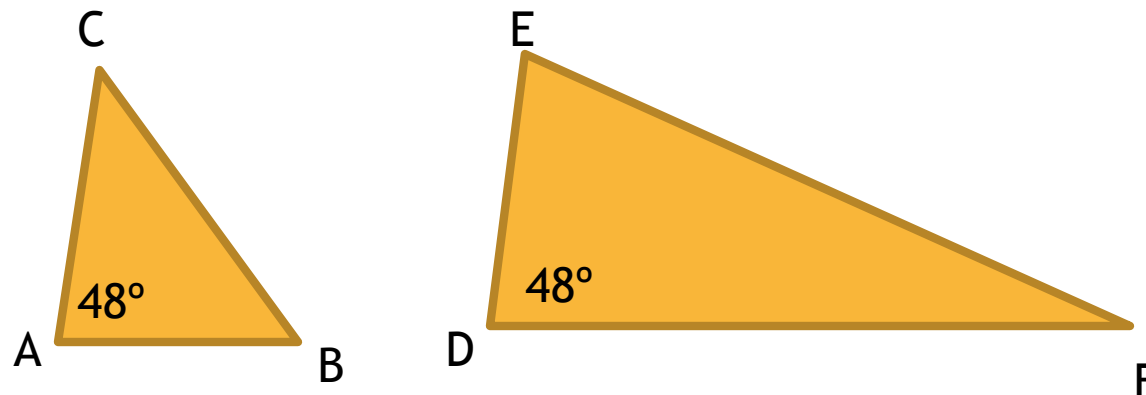
SO...WHY DO WE CARE ABOUT SIMILAR TRIANGLES?



- Triangles have special properties
 - They have congruence shortcuts:
 - SSS - “Side-Side-Side”
 - SAS - “Side-Angle-Side”
 - AAS - “Angle-Angle-Side”
 - ASA- “Angle-Side-Angle”
 - Could they have similarity shortcuts?
 - What would the “Side” part of similarity shortcuts mean?
 - “Side” in this case means that the corresponding sides in each triangle would have the same proportion.

WILL JUST “ANGLE” WORK ?

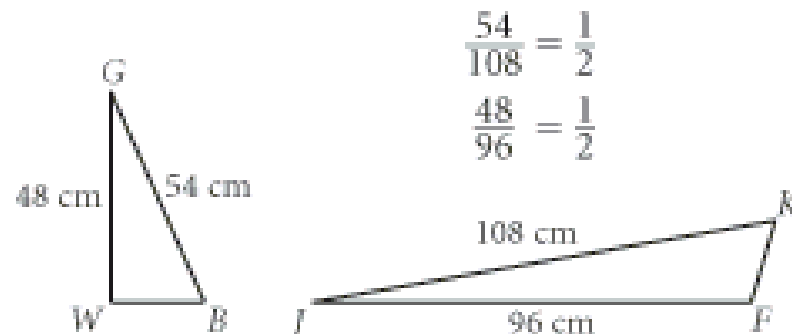
- ◉ Is knowing just one corresponding pair of congruent angles enough to prove similarity?
 - Sketchpad—demonstration
 - No, knowing just one corresponding pair of congruent angles is inconclusive to prove similarity.



$\angle A \cong \angle D$, but $\triangle ABC$ is not similar to $\triangle DEF$ or to $\triangle DFE$.

WILL “SIDE-SIDE” WORK?

- Are two triangles similar if given that two sets of corresponding sides are proportional?
 - Sketchpad example
 - No, knowing that two triangles have two sets of corresponding side are proportional is inconclusive to prove similarity.



$\frac{GB}{JK} = \frac{GW}{JF}$, but $\triangle GWE$ is not similar to $\triangle JFK$.

INVESTIGATIONS

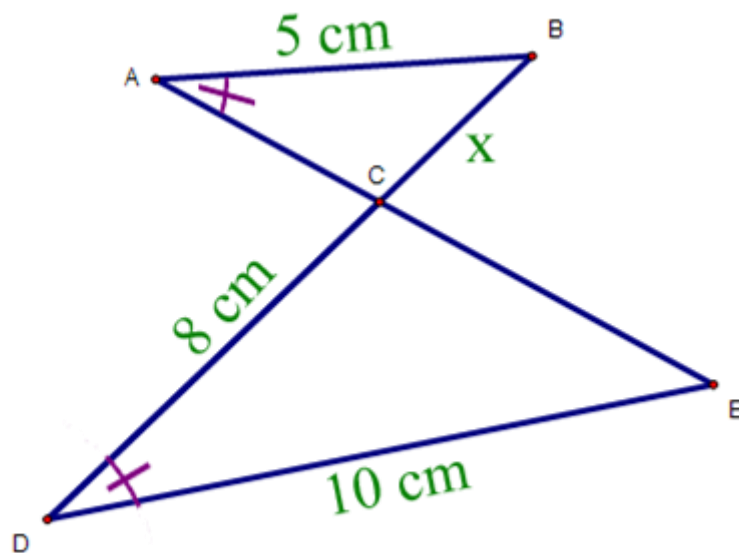


- Start investigations individually, but share your results with your partner.
 - As partners, come up with a clear and concise conjecture about each investigation.
 - Start with the investigation that is next to your name. (You are still required to do all of them)

Group	
Mitchell D., Allie, Jimmy M., Chris, Sarah, Ashlee, Mitch S.	Start with investigation #1
Evan, Mike, Jim S., Tim, Alexander L., Ethan	Start with investigation #2
Steven, Shristi, Deanna, Kiara, Alex C., Elijah	Start with investigation #3

EXIT SLIP

- Using the figure below answer the following questions:



1. Prove that $\triangle ABC \sim \triangle DEC$ using one of the similarity short cuts. Quickly explain how you came to that conclusion.
2. Find the value of X .