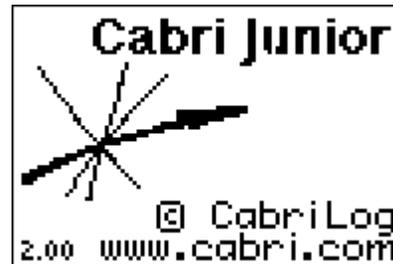


Similar Figures and Proportions with Cabri Jr.

On your TI-84 Plus calculator select the APPS button. Under APPS select the Cabri Jr. Application.

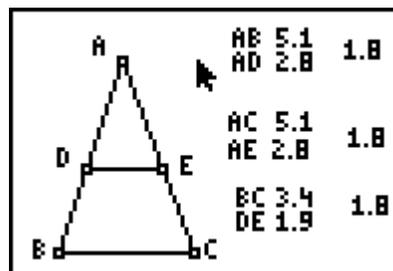


Press any key to continue.

EXPLORATION:

Let's explore the relationship between similar figures and ratios between corresponding sides.

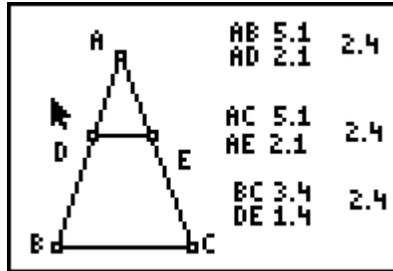
1. In the Cabri Jr. APP, go to F1: OPEN the file titled SIMFIG.



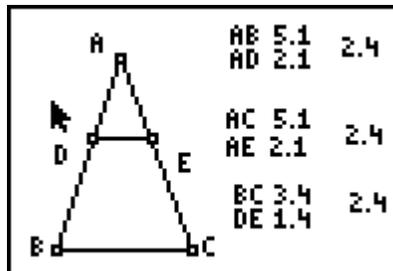
2. Name all corresponding sides of triangle ABC and triangle ADE. Also, label their lengths.

3. What do you notice about the ratios of corresponding parts of the similar triangles ABC and ADE? (Make sure that the ratios of corresponding sides are placed to the right of each group of measurements.)

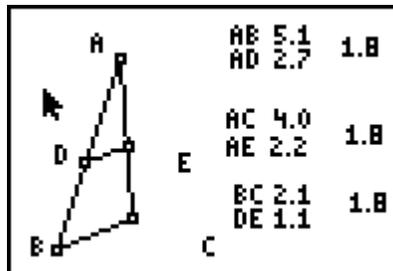
4. Grab point D (move the cursor to point D, press ALPHA to get the “grab hand”, use the arrow keys to move the point, press CLEAR to release) and move the point along side AB.



5. What do you observe about the measures? What do you observe about the ratios as you move point D?
6. You can say that the scale factor from triangle ADE to triangle ABC is 2.4 in the below sketch. What is the scale factor for your drawing?



7. Next, grab a vertex and move it around (move the cursor to a vertex, press ALPHA to get the “grab hand”, use the arrow keys to move the point, press CLEAR to release). Again, what do you observe about the measures? What do you observe about the ratios as you move the vertex?



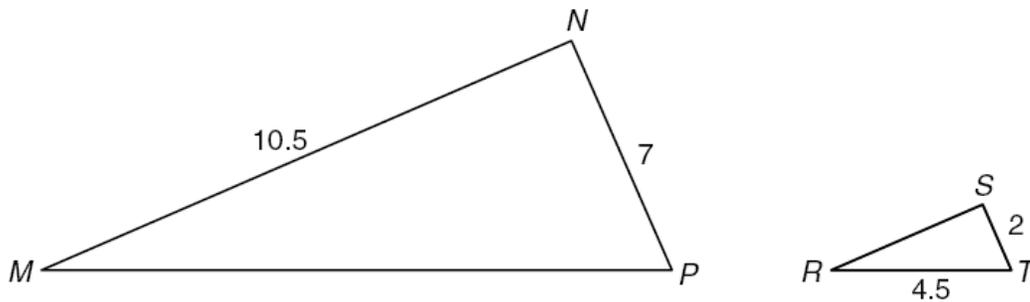
8. In general, what is the relationship between ratios of corresponding parts of similar triangles?

Extention:

Measure all angles in triangle ABC and triangle ADE. Make a conjecture about angles in similar triangles.

Check for Understanding

$\triangle MNP \sim \triangle RST$ is shown below.



Which scale factor was used to transform $\triangle MNP$ to $\triangle RST$?

- A $\frac{1}{3}$
- B $\frac{1}{2}$
- C $\frac{2}{7}$
- D 5