$\qquad$
$\qquad$
A ratio uses division to compare two quantities.
A proportion is an equation that states that two ratios are equivalent.
In this activity, you will explore two different ways to compare similar triangles.

## Problem 1 - Ratios of corresponding sides

In Cabri Jr. open the file RATIO. $\triangle A B C$ is similar to $\triangle D E F$.
Find the lengths of the sides using the $\mathbf{D}$. \& Length tool from the Measure menu.
Then use the Calculate tool to find the ratios below.
$\frac{A B}{D E}$
$\frac{B C}{E F}$
$\frac{A C}{D F}$

1. What do you notice about the values of the ratios?
2. Use the point on the slider to change the size of $\triangle D E F$. What do you notice about the ratios?
3. Move points $A, B$, or $C$. What do you notice about the ratios?
4. Using the letters of the triangles, write a proportion comparing the lengths of corresponding sides.

## Ratios of Similar Triangles

Problem 2 - Ratios of two sides of a triangle
Use the Clear > Object command to delete the ratios you found in Problem 1.
Then use the Calculate tool to find the ratios below.

| $\frac{A B}{B C}$ | $\frac{B C}{A C}$ | $\frac{A C}{A B}$ |
| :--- | :--- | :--- |
| $\frac{D E}{E F}$ | $\frac{E F}{D F}$ | $\frac{D F}{D E}$ |

5. What do you notice about the the ratios?
6. Use the slider to change $\triangle D E F$. What do you notice about the ratios?
7. Move points $A, B$, and $C$. What do you notice about the ratios?
8. Write proportions using the ratios (in letter form).
