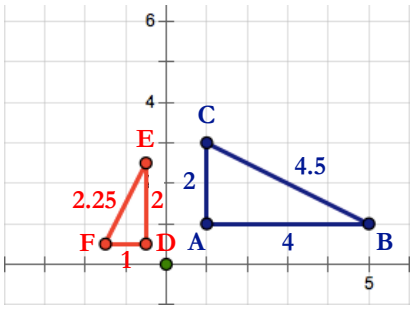
Show ΔABC and ΔDEF are similar.



Jaxon's "Definition" Method

I measure the angles of both triangles and found that all of the angles in ΔABC are congruent to the angles in ΔDEF.

$m\angle A = 90°$ $m\angle D = 90°$
$m\angle B = 37°$ $m\angle E = 37°$
$m\angle C = 63°$ $m\angle F = 63°$

All of the side lengths in ΔABC are proportional to the side lengths in ΔDEF.

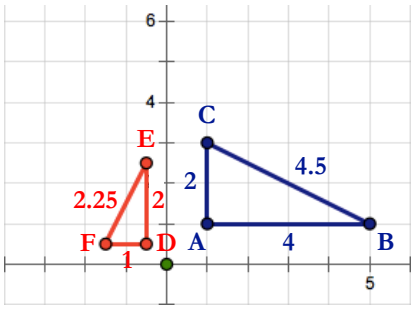
$$\frac{\Delta DEF \text{ side lengths}}{\Delta ABC \text{ side lengths}}$$

$$\frac{1}{2} = \frac{2}{4} = \frac{2.25}{4.5} = \frac{1}{2}$$

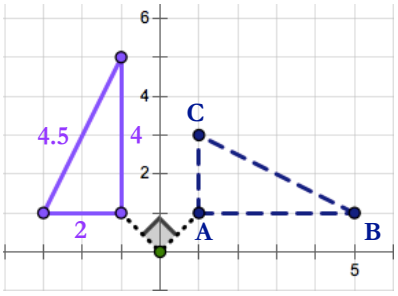
The triangles are similar.

$$\Delta ABC \sim \Delta DEF$$

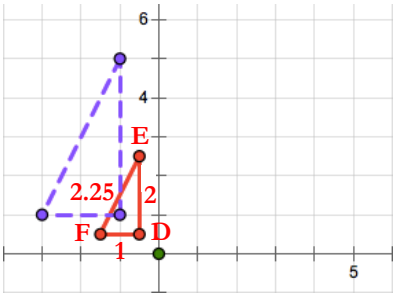
Show ΔABC and ΔDEF are similar.



Maxine's "Transformation" Method



I am going to rotate the figure counterclockwise about the origin.

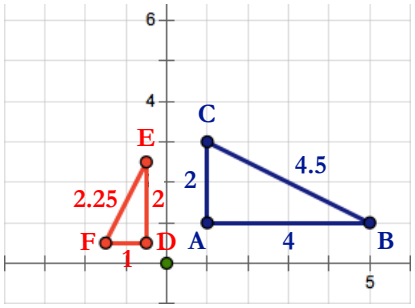


Now I will dilate the figure about the origin by a scale factor of 1/2.

$\Delta ABC \sim \Delta DEF$

So, the triangles are similar.

Show ΔABC and ΔDEF are similar.



Jaxon's "Definition" Method

I measure the angles of both triangles and found that all of the angles in ΔABC are congruent to the angles in ΔDEF.

$m\angle A = 90°$ $m\angle D = 90°$
$m\angle B = 37°$ $m\angle E = 37°$
$m\angle C = 63°$ $m\angle F = 63°$

All of the side lengths in ΔABC are proportional to the side lengths in ΔDEF.

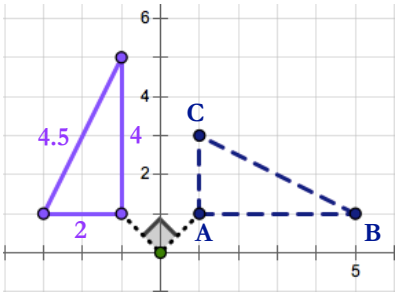
$$\frac{\Delta DEF \text{ side lengths}}{\Delta ABC \text{ side lengths}}$$

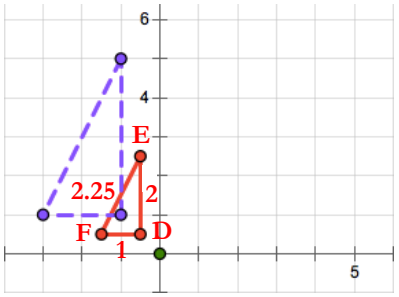
$$\frac{1}{2} = \frac{2}{4} = \frac{2.25}{4.5} = \frac{1}{2}$$

The triangles are similar.

$\Delta ABC \sim \Delta DEF$

Maxine's "Transformation" Method





I am going to rotate the figure counterclockwise about the origin.

Now I will dilate the figure about the origin by a scale factor of 1/2.

So, the triangles are similar.

$\Delta ABC \sim \Delta DEF$

1) What are the similarities and differences between Jaxon and Maxine's methods?

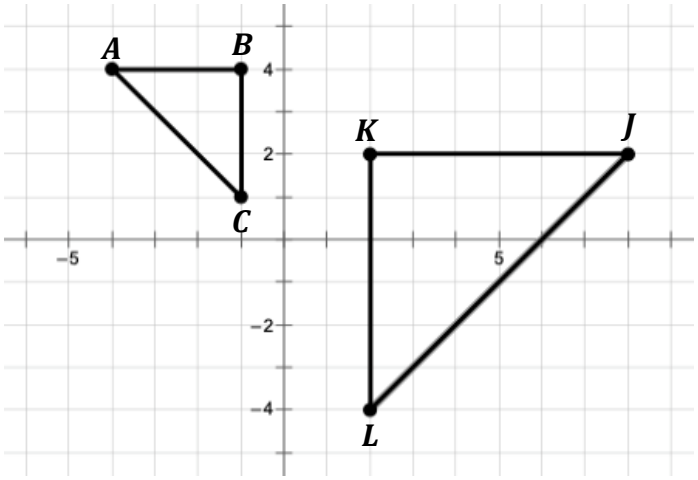
Similarities	Differences

b) Would you prefer to use Jaxon or Maxine's method to show similarity? Justify your choice.

2) How do you know Jaxon's "Definition" method shows the two triangles are similar?

3) How do you know Maxine's "Transformation" method shows the two triangles are similar?

4) Using translations, reflections, rotations, and/or dilations, describe the steps that show that $\Delta ABC \sim \Delta JKL$.



Show ΔABC ~ ΔDEF

Maxine showed me that when two figures are similar, I just need to find transformations from one figure to the other to prove they are similar.

Alex's

I measure t
of both tria
found that a
angles in ΔA
congruent to
angles in ΔD

All of the s
lengths in ΔAB
proportional to
side lengths in
ΔDEF.

The triangles are similar.

I will dilate the
ure about the
gin by a scale
factor of 1/2.

5

ΔDEF

$\Delta ABC \sim \Delta DEF$

So, the triangles are similar.