

Created by Lily Unick
Warmup 2 / (# of letters in "red + orange + yellow + green + blue")

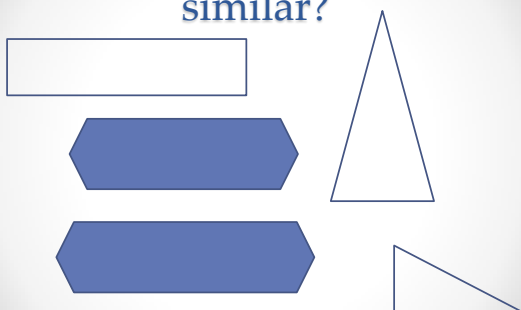
- 1) Similar Figures are the same shape but different sizes. The angles are congruent and the sides will be proportional. Find the "Math is Infinite" poster and the "Numbers Everywhere" Poster. Do you think they are exactly similar?
- 2) Draw a square and a rectangle. (Yes, I know this is easy.)
- 3) Can you change the shape of a triangle while still keeping the angles the same?
- 4) Can you change the shape of a quadrilateral while still keeping the angles the same?

Is the "Math is Infinite" poster similar to the "Numbers Everywhere!" Poster?

▶ **ONE VOLUNTEER to measure:**

- The length and width of the "Math is Infinite" poster
- The length and width of the "Numbers Everywhere" poster

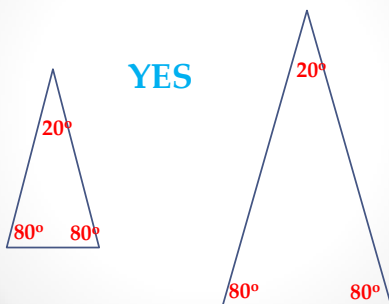
Are they DEFINITELY similar?



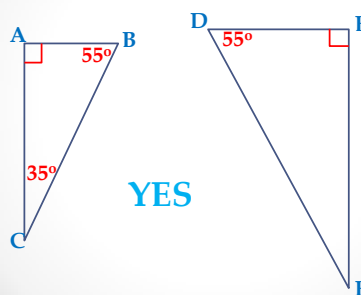
- *****If all of the corresponding angles of two triangles are congruent, the triangles are similar. You do not need to check the sides!!!*****

- **This DOES NOT WORK with any other shape.** It is a little complicated to show this, but the main idea is that you can't "stretch out" the sides of a triangle without changing the angles too. You CAN "stretch out" the sides of bigger shapes without changing the angles.

Are they DEFINITELY similar?

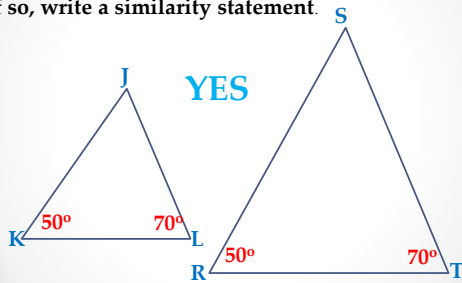


Are they DEFINITELY similar?



Are they DEFINITELY similar?

If so, write a similarity statement.

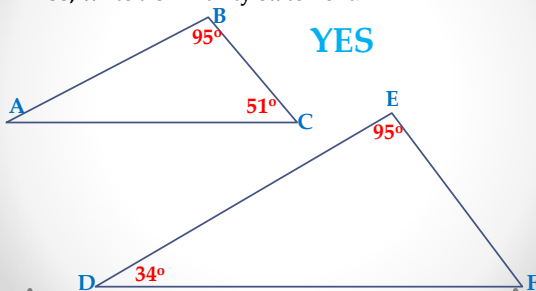


“Third Angles” Rule

- If the first two pairs of angles are congruent, the third angles will automatically be congruent!

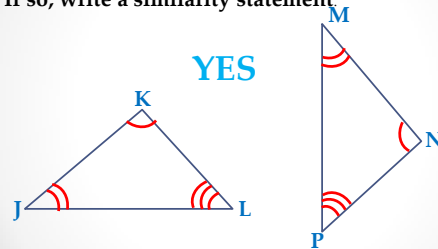
Are they DEFINITELY similar?

If so, write a similarity statement.



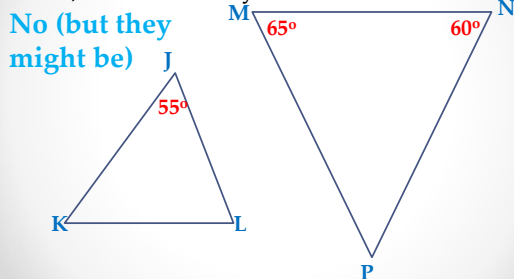
Are they DEFINITELY similar?

If so, write a similarity statement.



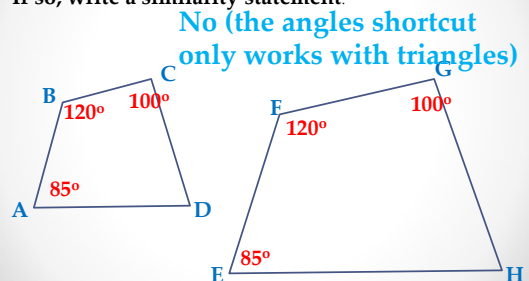
Are they DEFINITELY similar?

If so, write a similarity statement.



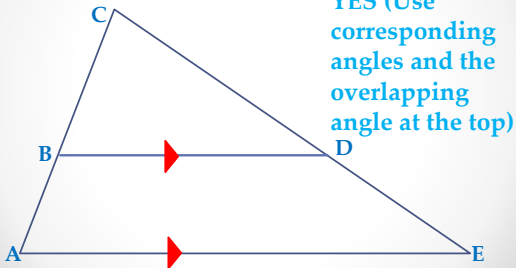
Are they DEFINITELY similar?

If so, write a similarity statement.



Are they DEFINITELY similar?

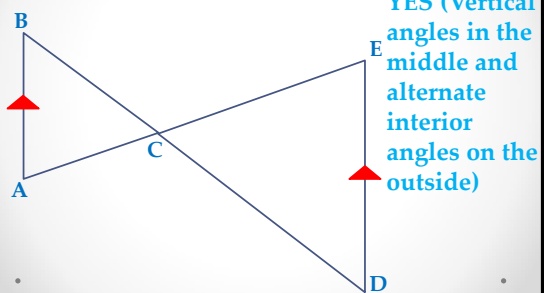
If so, write a similarity statement.



YES (Use corresponding angles and the overlapping angle at the top)

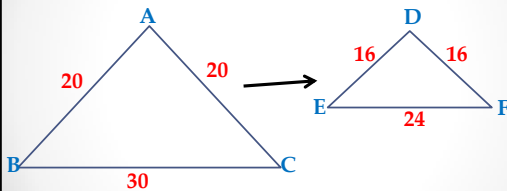
Are they DEFINITELY similar?

If so, write a similarity statement.



YES (Vertical angles in the middle and alternate interior angles on the outside)

Are they DEFINITELY similar?



YES (Scale factor is $\frac{4}{5}$ for each side)

FINISH/CORRECT THE LAST PAGE:

- p. 548 (1 – 4)
- p. 549 (1 – 4)
- p. 557 (1, 2, 6)

Practice: Finding a sequence of transformations

- ▶ You will have to find a sequence of transformations that maps one shape to the other
- ▶ Translations – say which direction & how far
- ▶ Reflections – say what you're reflecting over
- ▶ Rotations – say which direction & how many degrees
- ▶ Dilations – say the scale factor
- ▶ **ADVICE:** If there is a dilation, do that step first.

