Math 2 Name: Key

Unit 4A Day 5 Notes – Proving Similar Triangles Date: _____

The 3 ways to prove similar triangles are: SSS (side-side-side), SAS (side-angle-side), and AA (Angle-Angle).

Examples

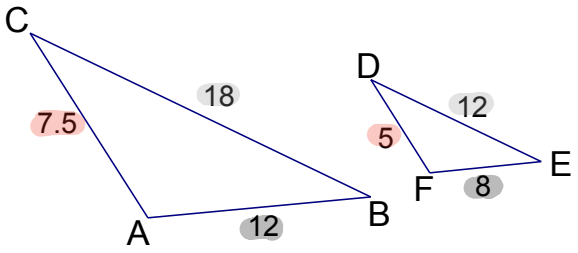
Decide if each pair of triangles is similar. If they are, write the correspondence in the first blank and the reason in the second blank. If they are NOT similar, write NS in the second blank.

1) Δ ABC ~ Δ FED by SSS

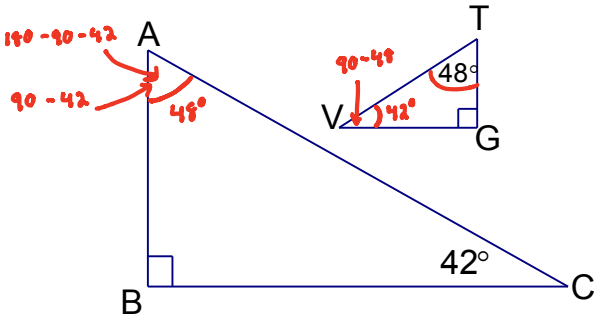
$\frac{7.5}{5} = 1.5$ or $\frac{3}{2}$

$\frac{18}{12} = 1.5$ or $\frac{3}{2}$

$\frac{12}{8} = 1.5$ or $\frac{3}{2}$



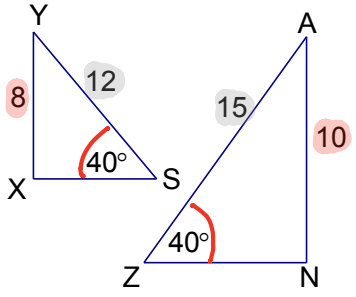
2) Δ ABC ~ Δ TGV by AA



3) Δ YXS ~ Δ ANZ by SAS

$\frac{8}{10} = \frac{4}{5}$ or .8

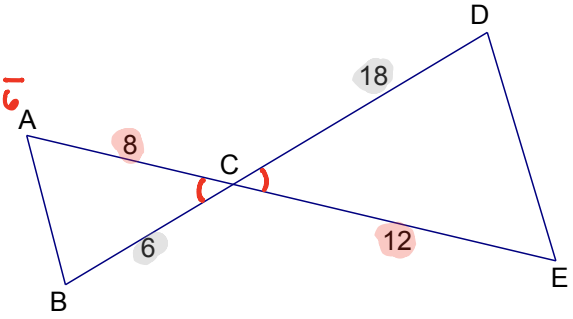
$\frac{12}{15} = \frac{4}{5}$ or .8



4) Δ ABC ~ Δ _____ by NS

$\frac{8}{12} = \frac{2}{3}$ or $.\overline{6}$

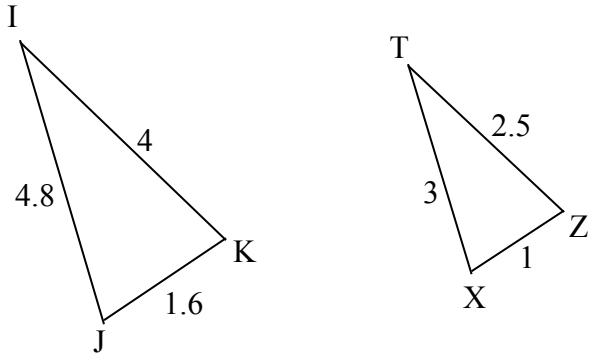
$\frac{6}{18} = \frac{1}{3}$ or $.\overline{3}$



Unit 4A Day 5 CW

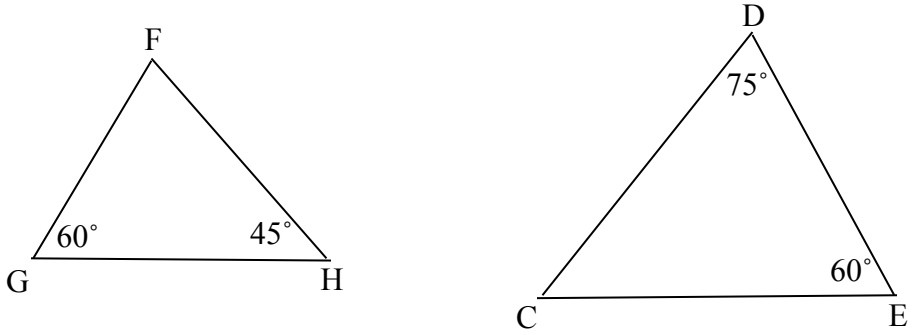
Determine whether each pair of triangles is similar. If the triangles are similar, justify your answer by using SSS, SAS, and AA. Make sure you have work to support your answer.

1.



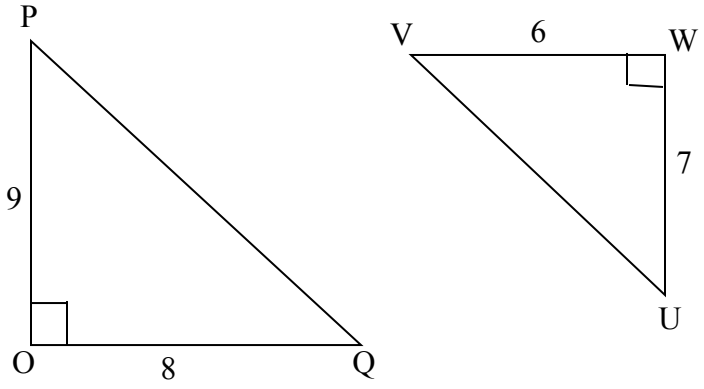
Yes No Δ _____ $\sim \Delta$ _____ by _____

2.



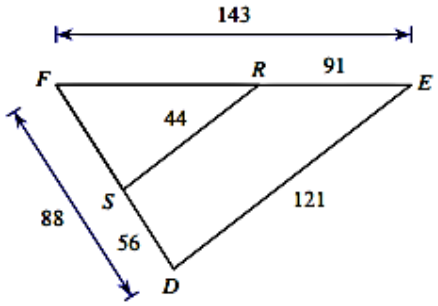
Yes No Δ _____ $\sim \Delta$ _____ by _____

3.



Yes No Δ _____ $\sim \Delta$ _____ by _____

4.

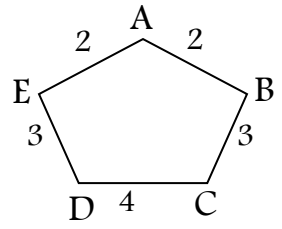


Yes No Δ _____ ~ Δ _____ by _____

5. Ryan is 5 feet tall. His shadow is 9 feet long and the shadow of a building is 36 feet long. How tall is the building? Draw two similar triangles and then determine the height of the building.

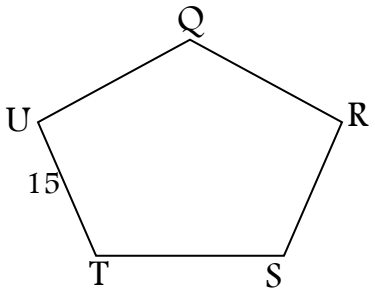
6. ABCDE is similar to QRSTU

The similarity ratio of ABCDE to QRSTU is _____.



The scale factor of ABCDE to QRSTU is _____.

Find the length of each side.



QU _____

QR _____

RS _____

ST _____

Perimeter of ABCDE_____

Perimeter of QRSTU_____

ratio of perimeter of ABCDE to perimeter of QRSTU _____