Similar Triangle Review **Name:** Key

When two figures are similar, what has to be true?

1. $\angle$'s $=$ 2. Sides proportional

3. Solve each proportion: *Prove by AA, SAS, SSS

a. $\frac{5}{x} = \frac{8}{11}$

$\frac{55}{8} = \frac{8x}{8}$

$x = 6.8$

b. $\frac{3}{5} = \frac{6}{x+3}$

$3(x+3) = 30$

$3x + 9 = 30$

$-9 \quad -9$

$\frac{3x}{3} = \frac{21}{3}$

$x = 7$

c. $\frac{x+3}{3} = \frac{10+4}{4}$

$4(x+3) = 3(14)$

$4x + 12 = 42$

$-12 \quad -12$

$\frac{4x}{4} = \frac{30}{4}$

$x = 7.5$

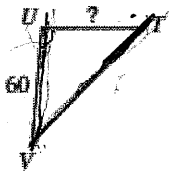
10,5 $x + 3 = 10,5$

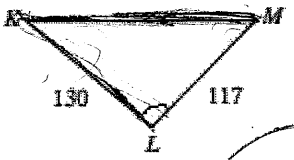
4. Complete each statement if Polygon $LIFE \sim BOAT$

a. $\angle F = \angle$ A b. $\angle E = \angle$ T c. $\frac{IE}{OA} = \frac{FE}{AT}$ d. $\frac{LE}{BT} = \frac{LL}{BO}$

5. The following shapes are similar. Complete the similarity statement and find the missing side.

a. 54





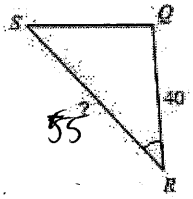
$\frac{B}{S} \quad \frac{130}{60} = \frac{117}{x}$

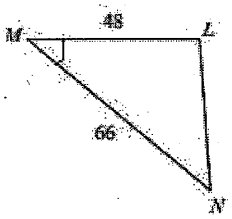
$\frac{7020}{130} = \frac{130x}{130}$

$x = 54$

$x =$ 54 $\Delta TVU \sim \Delta$ MKL

b.





$\frac{B}{S} \quad \frac{66}{x} = \frac{48}{40}$

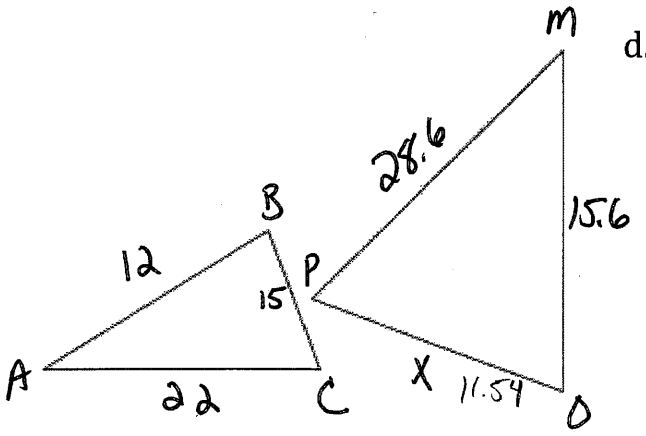
$\frac{2640}{48} = \frac{48x}{48}$

$x = 55$

$x =$ 55 $\Delta LNM \sim \Delta$ QSR

Similar Triangle Review **Name:**_____

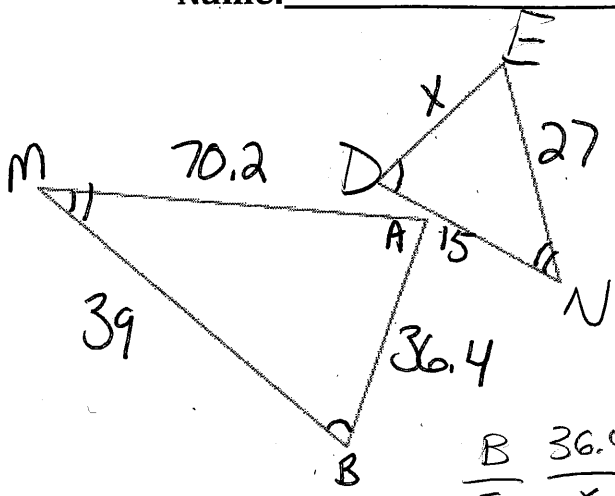
c.



$\frac{B}{S}\ \frac{28.6}{22} = \frac{15.6}{x}$ $\frac{330}{28.6} = \frac{28.6x}{28.6}$ $x = 11.54$

$x =$ 11.54 $\Delta ABC \sim \Delta$ POM

d.

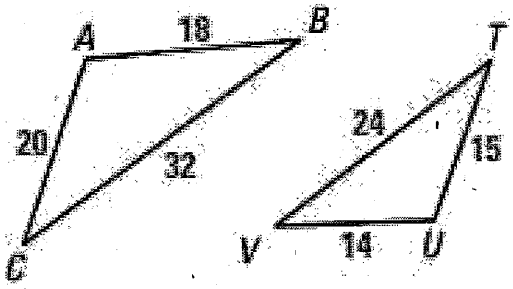


$\frac{B}{S}\ \frac{36.4}{x} = \frac{39}{15}$ $\frac{546}{39} = \frac{39x}{39}$ $x = 14$

$x =$ 14 $\Delta BAM \sim \Delta$ DEN

6. If possible, prove that the two triangles are similar by using a FLOWCHART. In the final Circle I should see a similarity statement like the ones above and an Abbreviation on what you used to come to that statement. If they are not similar just write NOT SIMILAR.

a.



$\frac{32}{24} = 1.\overline{3}$ $\frac{20}{15} = 1.\overline{3}$ $\frac{18}{14} = 1.28$

Not Similar

$\Delta ABC \sim \Delta$ ____

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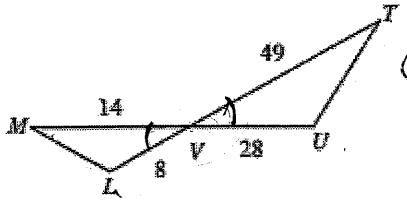
b.



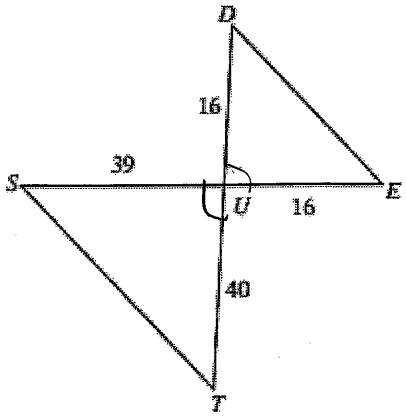
$\frac{49}{14} = 3.5$ $\frac{28}{8} = 3.5$ $\angle TVU = \angle MVL$

$\Delta VUT \sim \Delta VLM$ → SAS

$\Delta VUT \sim$ ____

Similar Triangle Review Name:_____

c.

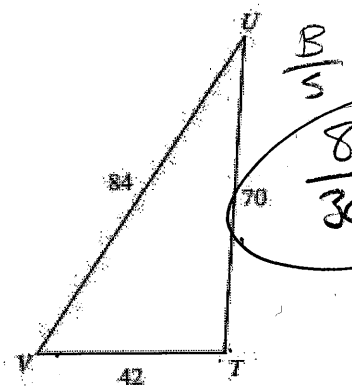


ΔUTS ~ _____

B/S 39/16 40/16

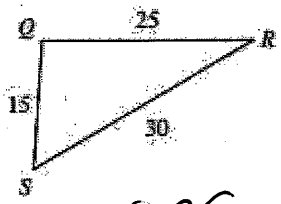
Not Similar

d.



B/S

84/30 = 2.8 70/25 = 2.8 42/15 = 2.8

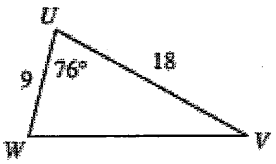


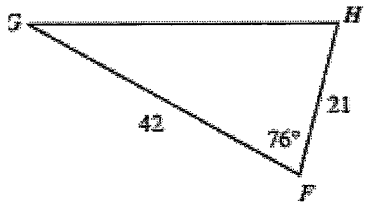
ΔTUV ~ QRS

ΔTUV ~ ΔQRS

SSS

e.





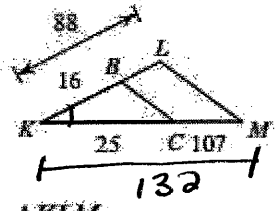
B/S

42/18 = 2.3̄ ∠U = ∠F 21/9 = 2.3̄

ΔGFH ~ ΔVUW

SAS~

f.



ΔKLM ~ _____

25/16 = 1.5625 132/88 = 1.5

Not Similar