7-4 Using Similarity to determine Measures #13

October 29, 2013

I. Relationships in Similar Triangles

A. Angles are congruent

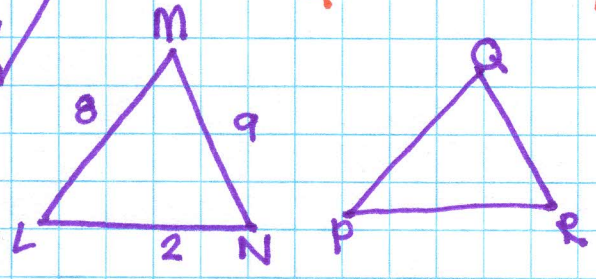
B. Sides are similar
→ are equal fractions
→ fraction is called the "scale" (Similarity Ratio)

II. To Solve for Measures . . . on similar triangles

A. Set angles equal

B. Create fractions for the sides & set them equal.

Ex



$\triangle LMN \sim \triangle QRP$

The Similarity Ratio is $\frac{3}{4}$

RP = ?

$\frac{LM}{QR} = \frac{8}{QR}$ $\frac{MN}{RP} = \frac{9}{RP}$ $\frac{LN}{QP} = \frac{2}{QP}$

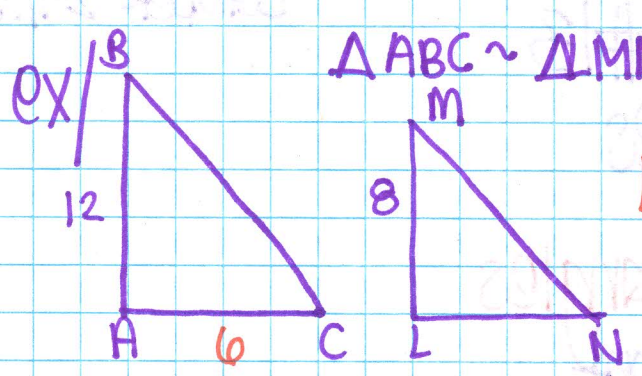
$\frac{9}{RP} = \frac{3}{4}$

$9(4) = 3(RP)$

$36 = 3RP$

$12 = RP$

13



$\Delta ABC \sim \Delta LMN$

LN?

$\frac{AB}{LM} = \frac{12}{8} = \frac{3}{2}$ $\quad \frac{BC}{MN}$ $\quad \frac{AC}{LN} = \frac{6}{LN}$

$\frac{3}{2} = \frac{6}{LN}$

$3LN = 6(2)$

$3LN = 12$

$LN = 4$