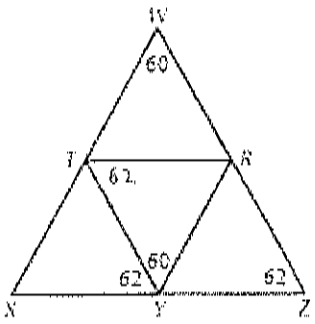
Grade 8

Review for Test on Similar Triangles

Determine if the following pair of triangles are similar.

1) In the diagram below, TR || XZ. Determine if ΔRYT ~ ΔXWZ



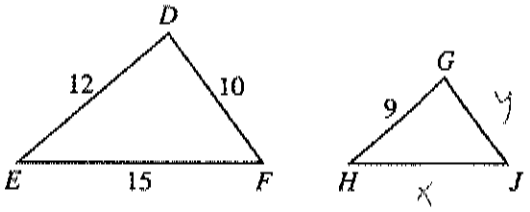
$\angle TYR \cong \angle XWZ = 60$

$\angle RTY \cong \angle WZX = 62$

$\Delta RYT \sim \Delta XWZ$ because AA~

2) In the diagram, ΔDEF ~ ΔGHJ. The measures in inches are DE = 12, DF = 10, EF = 15, and GH = 9

a) Find HJ and GJ.



$\frac{SM}{LG} = \frac{9}{12} = \frac{y}{10}$ | $\frac{SM}{LG} = \frac{9}{12} = \frac{x}{15}$

$12y = 90$ | $12x = 135$

$y = 7.5$ | $x = 11.25$

b) What is the ratio of the perimeters?

$\frac{9}{12} = \frac{3}{4}$ Scale factor = .75

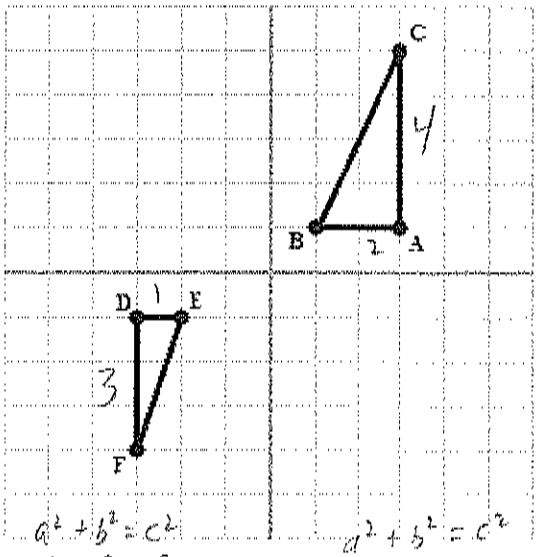
3) a) Is ΔABC ~ ΔDEF?

$\frac{SM}{LG} = \frac{1}{2}, \frac{3}{4}, \frac{\sqrt{10}}{\sqrt{20}}$

.5 .75 .707

b) Find the measure of BC and EF.

the Δ's are not similar since the scale factors are not equal



$a^2 + b^2 = c^2$

$1^2 + 3^2 = x^2$

$1 + 9 = x^2$

$10 = x^2$

$x = \sqrt{10}$

$a^2 + b^2 = c^2$

$2^2 + 4^2 = x^2$

$4 + 16 = x^2$

$20 = x^2$

$x = \sqrt{20}$