APRIL 22, 2016

UNIT 7: SIMILARITY AND TRANSFORMATIONS

7.4: SIMILAR TRIANGLES

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MATH 9

WHAT'S THE POINT OF TODAY'S LESSON?

We will continue working on the Math 9 Specific Curriculum Outcome (SCO) "Shape and Space 3" OR "SS3" which states:

"Demonstrate an understanding of similarity of polygons."

SIMILAR TRIANGLES

TO IDENTIFY SIMILAR TRIANGLES:

* the measures of the 3 pairs of corresponding angles must be EQUAL

OR

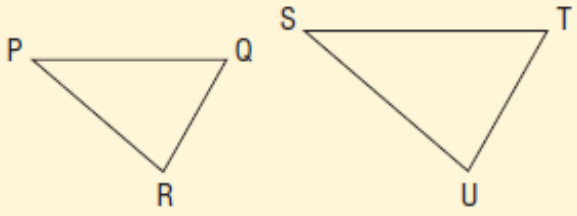
* the ratios of the lengths of the 3 pairs of corresponding sides must be EQUAL; in other words, corresponding sides are proportional

***MMS9*, Page 344:**

Properties of Similar Triangles

To identify that ΔPQR and ΔSTU are similar, we only need to know that:

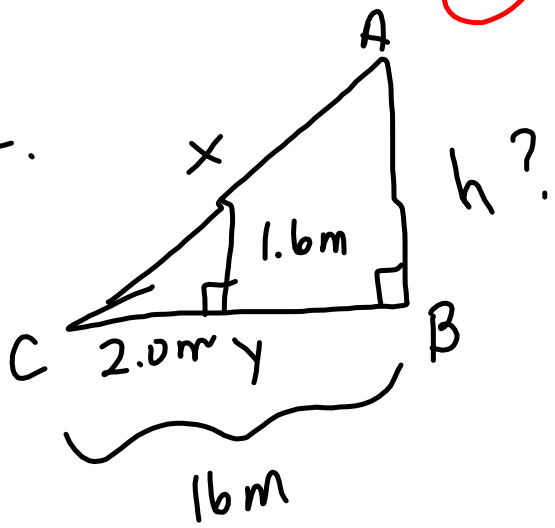
- $\angle P = \angle S$ and $\angle Q = \angle T$ and $\angle R = \angle U$; *or*
- $\frac{PQ}{ST} = \frac{QR}{TU} = \frac{PR}{SU}$



HOMEWORK QUESTIONS?

(pages 350 / 351, #7 and #10 TO #13)

7.



$\angle B = \angle Y$ (GIVEN)

$\angle C = \angle C$ (COMMON)

$\angle A = \angle X$ (SATT)

$\therefore \triangle ABC \sim \triangle XYC$ (AAA)

$$SF = \frac{s}{o} = \frac{2}{16} = \frac{1}{8} = 0.125$$

$$h = \frac{1.6}{0.125} = 12.8\text{m}$$

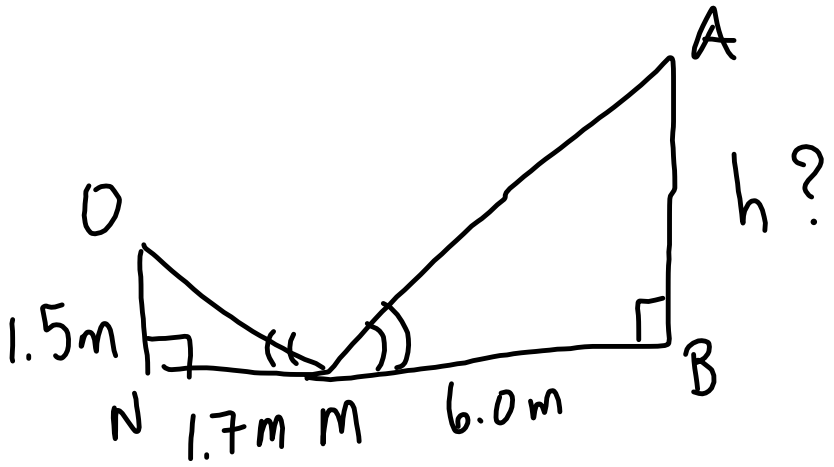
$\frac{h}{1.6} \times \frac{16}{2}$

$2h = 25.6$

$h = 12.8\text{m}$

HOMEWORK QUESTIONS?

(pages 350 / 351, #7 and #10 TO #13)



$\angle M = \angle m$ (GIVEN)
$\angle B = \angle N$ (GIVEN)
$\angle A = \angle O$ (SATT)
$\therefore \triangle ABMN \sim \triangle ONM$ (AAA)

$SF = \frac{S}{O}$
$= \frac{6}{1.7}$
$\doteq 3.5294$

$h \doteq 1.5(3.5294)$
$\doteq 5.2941$
$\doteq 5.3m$

OR

$\frac{h}{1.5} \times \frac{6}{1.7}$

$1.7h = 9$
$h \doteq 5.2941$
$h \doteq 5.3m$

CONCEPT REINFORCEMENT:

MMS9:

PAGE 351: #14 and #15

PAGE 352: #1 and #7

PAGE 377: #3

PAGE 378: #9 TO #11