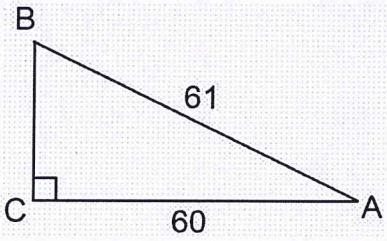
Bellwork Alg 2 Wednesday, March 18, 2020

1. Use all three properties of logarithms to write this as a single logarithm:
$-8\log_5 A + 2\log_5 R - \frac{1}{3}\log_5 X$

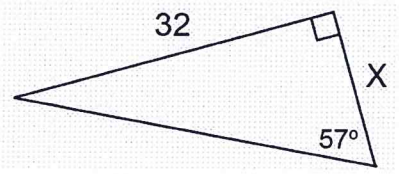
2. Write $\tan B$ as a ratio.

$\tan B =$



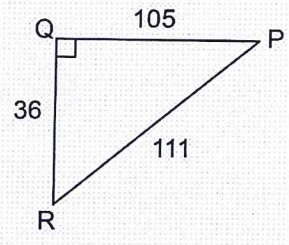
3. Find the value of x to the nearest hundredth.

$x =$



4. Find the measure of $\angle P$ to the nearest hundredth of a degree.

$\angle P =$



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ANSWERS

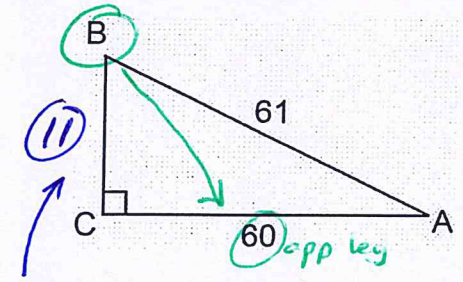
1. Use all three properties of logarithms to write this as a single logarithm:

$-8\log_5 A + 2\log_5 R - \frac{1}{3}\log_5 X$

$\log_5 \frac{R^2}{A^8\sqrt[3]{X}}$

2. Write $\tan B$ as a ratio.

$\tan B = \frac{60}{11}$



SOHCAH TOA

$\tan B = \frac{\text{opp leg}}{\text{adj leg}}$

adj leg:

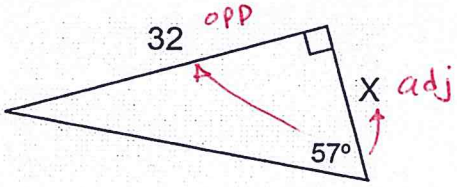
$61^2 = 60^2 + x^2$

$x^2 = 61^2 - 60^2$

$x = \sqrt{61^2 - 60^2} = 11$

3. Find the value of x to the nearest hundredth.

$x = 20.78$



$\tan\theta = \frac{\text{opp}}{\text{adj}}$

$\tan 57° = \frac{32}{X}$

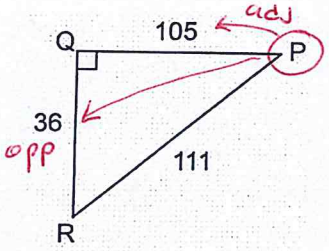
$\frac{\tan 57°}{1} = \frac{32}{X}$

$X = (32)(1) \div \tan 57°$

$= \frac{32}{\tan 57°}$

$X = 20.78$

4. Find the measure of $\angle P$ to the nearest hundredth of a degree.



$\angle P = 18.92°$

$\tan P = \frac{36}{105}$

$\angle P = \tan^{-1}\left(\frac{36}{105}\right)$

$\angle P = 18.92°$