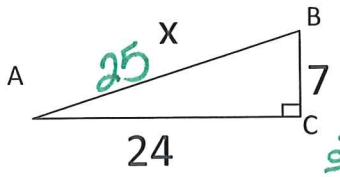
Name: Key

Trig: Ratios, Angles and Sides In-Class Practice

1. Consider the triangle ABC, shown below. Use the Pythagorean Theorem to find the missing side. Then find all trig ratios below and simplify all answers.



X= 25

$24^2 + 7^2 = x^2$

$576 + 49 = x^2$

$\sqrt{625} = \sqrt{x^2}$

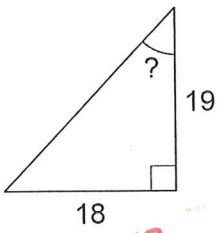
$25 = x$

sin ∠ A = $\frac{7}{25}$ cos ∠ A = $\frac{24}{25}$ tan ∠ A = $\frac{7}{24}$

sin ∠ B = $\frac{24}{25}$ cos ∠ B = $\frac{7}{25}$ tan ∠ B = $\frac{24}{7}$

Find the missing angle measures.

2.

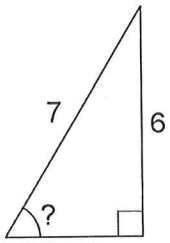


$\tan\theta = \frac{18}{19}$

$\theta = \tan^{-1}\left(\frac{18}{19}\right)$

$\theta = 43.45°$

3.

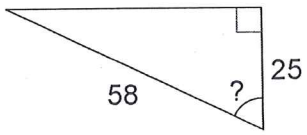


$\sin\theta = \frac{6}{7}$

$\theta = \sin^{-1}\left(\frac{6}{7}\right)$

$\theta = 59.00°$

4.



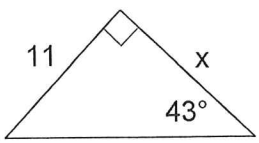
$\cos\theta = \frac{25}{58}$

$\theta = \cos^{-1}\left(\frac{25}{58}\right)$

$\theta = 64.47°$

Find the missing sides.

5.

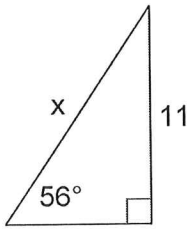


$\tan 43 = \frac{11}{x}$

$\frac{x \tan 43}{\tan 43} = \frac{11}{\tan 43}$

$x = 11.80$

6.

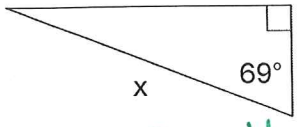


$\sin 56 = \frac{11}{x}$

$\frac{x \sin 56}{\sin 56} = \frac{11}{\sin 56}$

$x = 13.27$

7.



$x \cos 69 = \frac{11}{x} \cdot x$

$\frac{x \cos 69}{\cos 69} = \frac{11}{\cos 69}$

$x = 30.69$