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

ICM Trig and Limits

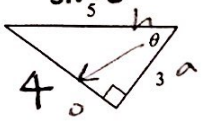
Name_____

Basic SOHCAHTOA Practice

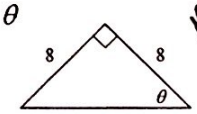
Date_____ Period____

Find the value of the trig function indicated.

1) $\csc\theta = \frac{1}{\sin\theta} = \frac{1}{\frac{4}{5}} = \frac{5}{4}$



2) $\csc\theta$



$\sqrt{128}$

$\sqrt{8\cdot16}$

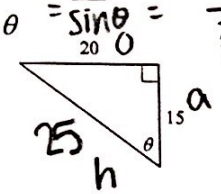
$4\sqrt{8}$

$4\sqrt{4\cdot2}$

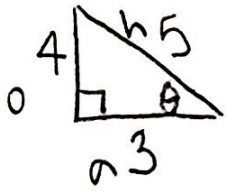
$\frac{8\sqrt{2}}{8}$

$\sqrt{2}$

3) $\csc\theta = \frac{1}{\sin\theta} = \frac{1}{\frac{20}{25}} = \frac{25}{20}$ $\frac{5}{4}$

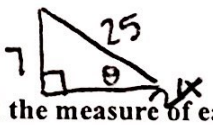


4) Find $\sin\theta$ if $\tan\theta = \frac{4}{3}$



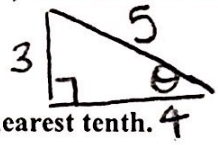
$\frac{4}{5}$

5) Find $\tan\theta$ if $\sin\theta = \frac{7}{25}$



$\frac{7}{24}$

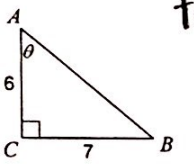
6) Find $\cos\theta$ if $\tan\theta = \frac{3}{4}$



$\frac{4}{5}$

Find the measure of each angle indicated. Round to the nearest tenth.

7)

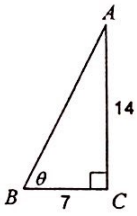


$\tan\theta = \frac{7}{6}$

$\theta = \tan^{-1}(7/6)$

$\boxed{\theta = 49.4°}$

8)



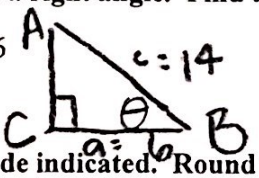
$\tan\theta = \frac{14}{7}$

$\theta = \tan^{-1}(14/7)$

$\boxed{\theta = 63.4°}$

In each problem, angle C is a right angle. Find the angle indicated to the nearest tenth.

9) Find $m\angle B$ if $c = 14$, $a = 6$

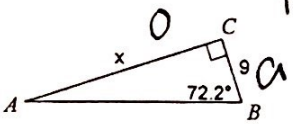


$\cos\theta = \frac{6}{14}$

$\theta = \cos^{-1}(6/14) = \boxed{64.6°}$

Find the measure of each side indicated. Round to the nearest tenth.

10)

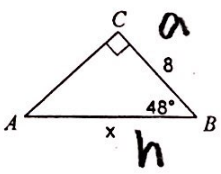


$\tan 72.2 = \frac{x}{9}$

$9\tan 72.2 = x$

$\boxed{28 = x}$

11)



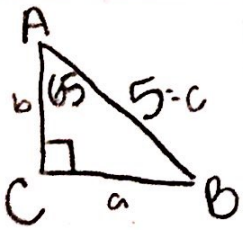
$\cos 48 = \frac{8}{x}$

$\frac{x\cos 48}{\cos 48} = \frac{8}{\cos 48}$

$x = 8/\cos 48 = 12$

In each problem, angle C is a right angle. Find the side indicated to the nearest tenth.

12) Find a if $m\angle A = 65°$, $c = 5$

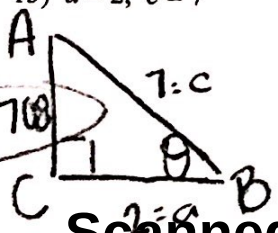


$\sin 65 = \frac{x}{5}$

$\boxed{4.5 = x}$

In each problem, angle C is a right angle. Solve each triangle rounding answers to the nearest tenth.

13) $a = 2$, $c = 7$



$\sin\theta = \frac{6.708}{7}$

$\theta = \sin^{-1}\left(\frac{6.708}{7}\right)$

$\theta = 73.4° = \angle B$

$180 - 90 - 73.4 = 16.6 = \angle A$