SohCahToa $\sin\theta = \frac{opp}{hyp}$ $\cos\theta = \frac{adj}{hyp}$ $\tan\theta = \frac{opp}{adj}$

Math 11 Name_____

Right Angled Trigonometry Refresher

Date_____

Find the value of each trigonometric ratio to the nearest ten-thousandth.

1) tan 62° = 1.8807

2) sin 79° = 0.9816

3) sin 81° = 0.9877

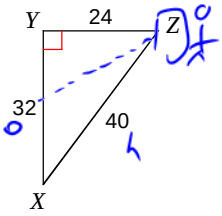
4) cos 58° = 0.5299

5) sin 40° = 0.6428

6) cos 4° = 0.9976

Find the value of each trigonometric ratio IN FRACTION FORM.

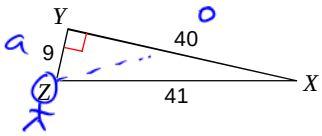
7) sin Z



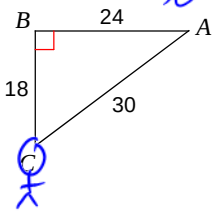
$\sin Z = \frac{32}{40}$

$\sin Z = \frac{4}{5}$

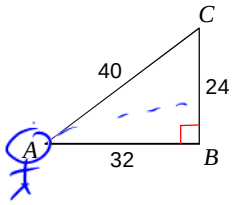
8) tan Z $= \frac{40}{9}$



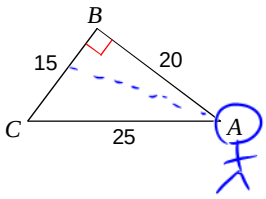
9) cos C $= \frac{18}{30} = \frac{3}{5}$



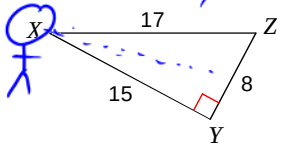
10) tan A $= \frac{24}{32} = \frac{3}{4}$



11) sin A $= \frac{15}{25} = \frac{3}{5}$



12) sin X $= \frac{8}{17}$



Find each angle measure to the nearest degree.

13) cos W = 0.6691

$\cos^{-1}(\cos W) = \cos^{-1}(0.6691) = 48°$

14) tan X = 0.9004

$X = \tan^{-1}(0.9004) = 42°$

15) sin W = 1.0000

$W = \sin^{-1}(1) = 90°$

16) cos Y = 0.6157

$Y = \cos^{-1}(0.6157) = 52°$

17) sin A = 0.9781

$A = \sin^{-1}(0.9781)$

$A = 78°$

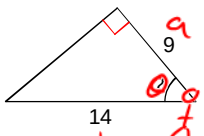
18) tan W = 0.8693

$W = \tan^{-1}(0.8693)$

$W = 41°$

Find the measure of the indicated angle to the nearest degree.

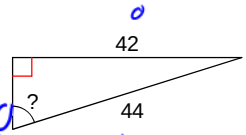
19)



$\cos\theta = \frac{9}{14}$

$\theta = \cos^{-1}\left(\frac{9}{14}\right) = 50°$

20)

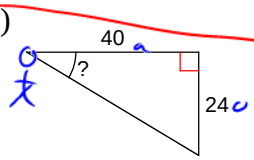


$\sin\theta = \frac{42}{44}$

$\theta = \sin^{-1}\left(\frac{42}{44}\right)$

$\theta = 73°$

21)

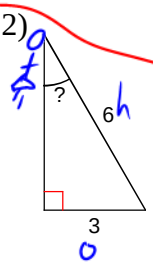


$\tan\theta = \frac{24}{40}$

$\theta = \tan^{-1}\left(\frac{24}{40}\right)$

$\theta = 31°$

22)

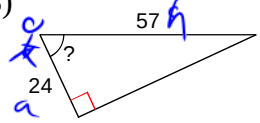


$\sin\theta = \frac{3}{6}$

$\theta = \sin^{-1}\left(\frac{3}{6}\right)$

$\theta = 30°$

23)

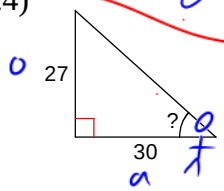


$\cos\theta = \frac{24}{57}$

$\theta = \cos^{-1}\left(\frac{24}{57}\right)$

$\theta = 65°$

24)



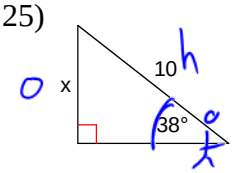
$\tan\theta = \frac{27}{30}$

$\theta = \tan^{-1}\left(\frac{27}{30}\right)$

$\theta = 42°$

Find the missing side. Round to the nearest tenth.

25)

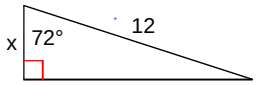


$10\sin 38 = \frac{x}{10}$

$10\sin 38 = x$

$6.2 = x$

26)

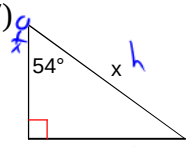


$\cos 72 = \frac{x}{12}$

$12\cos 72 = x$

$3.7 = x$

27)

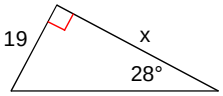


$\sin 54 = \frac{18}{x}$

$x = \frac{18}{\sin 54}$

$x = 22.2m$

28)

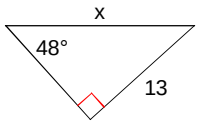


$\tan 28 = \frac{19}{x}$

$x = \frac{19}{\tan 28}$

$x = 35.7$

29)

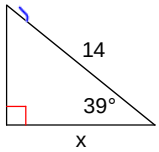


$\sin 48 = \frac{13}{x}$

$x = \frac{13}{\sin 48}$

$x = 17.5$

30)



$\cos 39 = \frac{x}{14}$

$14\cos 39 = x$

$10.9 = x$

Primary Ratios	Reciprocal Ratios
$\sin = \frac{opp}{hyp}$	$\frac{hyp}{opp} = \csc$ "cosecant"
$\cos = \frac{adj}{hyp}$	$\frac{hyp}{adj} = \sec$ "secant"
$\tan = \frac{opp}{adj}$	$\frac{adj}{opp} = \cot$ "cotangent"