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

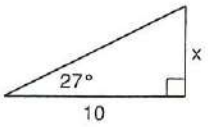
Name_____

## Using Trigonometry To Find Lengths

Date_____ Period____

**Find the missing side. Round to the nearest tenth.**

1)

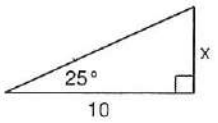



$\tan 27° = \frac{x}{10}$

$x = 10 \cdot \tan 27°$

$x = 5.1$

2)

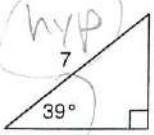



$\tan 25° = \frac{x}{10}$

$x = 10 \cdot \tan 25°$

$x = 4.7$

3)

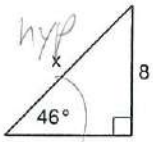



$\cos 39° = \frac{x}{7}$

$x = 7 \cdot \cos 39°$

$x = 5.4$

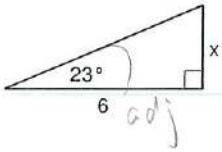
4)




$\sin 46° = \frac{8}{x}$

$x = \frac{8}{\sin 46°} = 11.1$

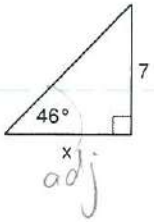
5)




$\tan 23° = \frac{x}{6}$

$x = 6 \cdot \tan 23° = 2.5$

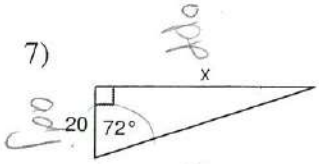
6)




$\tan 46° = \frac{7}{x}$

$x = \frac{7}{\tan 46°} = 6.8$

7)

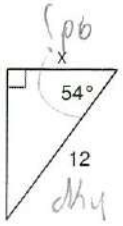



$\tan 72° = \frac{x}{20}$

$x = 20 \cdot \tan 72°$

$x = 61.6$

8)




$\cos 54° = \frac{x}{12}$

$x = 12 \cdot \cos 54°$

$x = 7.1$

$\sin^{-1}\left(\frac{opp}{hyp}\right)=\theta$ $\cos^{-1}\left(\frac{adj}{hyp}\right)=\theta$ $\tan^{-1}\left(\frac{opp}{adj}\right)=\theta$

Name_____

# Using Trigonometry to Find Angle Measures

Date_____ Period____

**Find each angle measure to the nearest degree.**

1) tan A = 2.0503

$\tan^{-1}(2.0503)=A=63.99\approx$ **64°**

2) cos Z = 0.1219

$\cos^{-1}(.1219)=Z=82.99\approx$ **83°**

3) tan Y = 0.6494

$\tan^{-1}(.6494)=$ **33°**

4) sin U = 0.8746

$\sin^{-1}(.8746)=U=$ **61°**

5) cos V = 0.6820

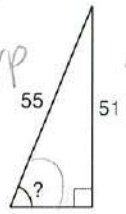
$\cos^{-1}(.6820)=V=$ **47°**

6) sin C = 0.2756

$\sin^{-1}(.2756)=$ **16°**

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

7)




$\sin\theta=\frac{opp}{hyp}$

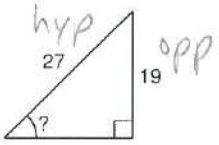
$\sin\theta=\frac{51}{55}$

$\sin\theta=.927$

$\sin^{-1}(.927)$

$=$ **68°**

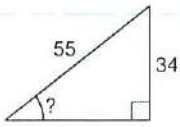
8)




$\sin^{-1}\left(\frac{19}{27}\right)=\theta$

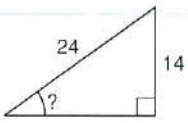
$\theta=$ **45°**

9)



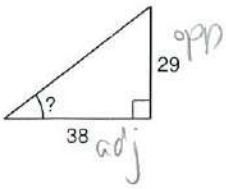

$\sin^{-1}\left(\frac{34}{55}\right)=\theta=$ **38°**

10)



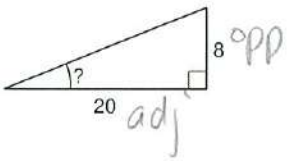

$\sin^{-1}\left(\frac{14}{24}\right)=$ **36°**

11)




$\tan^{-1}\left(\frac{29}{38}\right)=$ **37°**

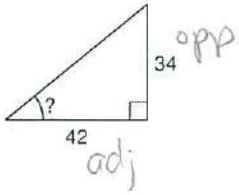
12)




$\tan^{-1}\left(\frac{8}{20}\right)=\theta$

$=$ **22°**

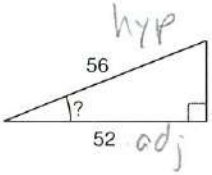
13)




$\tan^{-1}\left(\frac{34}{42}\right)=\theta$

$\theta=$ **39°**

14)




$\cos^{-1}\left(\frac{52}{56}\right)=\theta$

$\theta=$ **22°**

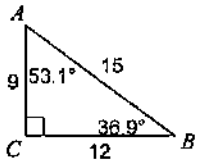
AAT - Right Triangle Trigonometry (13.1) Name_____

# Worksheet #2 - Solving Right Triangles

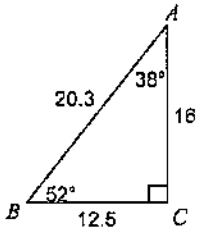
Date_____ Period____

**Solve each triangle. Round answers to the nearest tenth.**

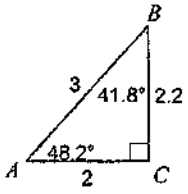
1)



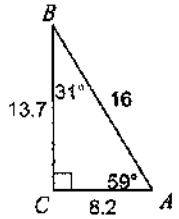

2)



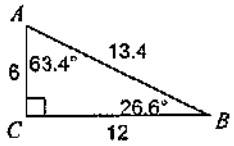

3)



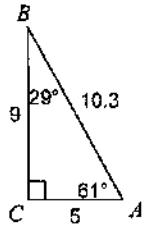

4)



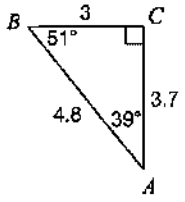

5)



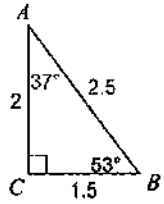

6)



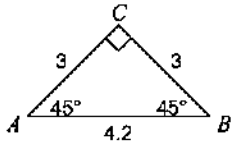

7)




8)




9)




10)