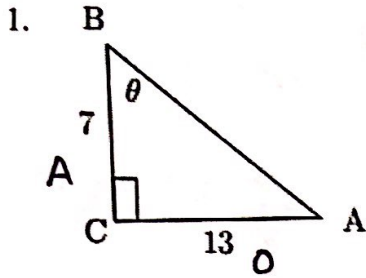


Name: Key

Class: \_\_\_\_\_

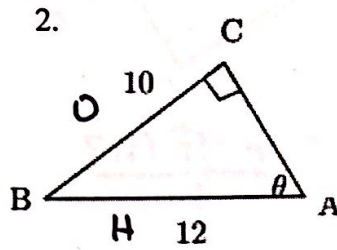
Practice with Trigonometry – Missing Angles

Part 1: Use inverse trigonometry to solve for the missing angle measure.



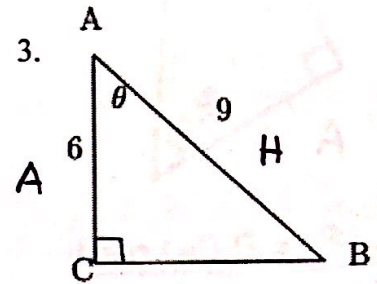
$$\tan \theta = \frac{13}{7}$$

Trig ratio: tangent  
 $\theta = \underline{61.7^\circ}$



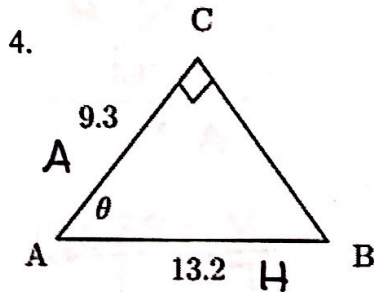
$$\sin \theta = \frac{10}{12}$$

Trig ratio: sine  
 $\theta = \underline{56.4^\circ}$



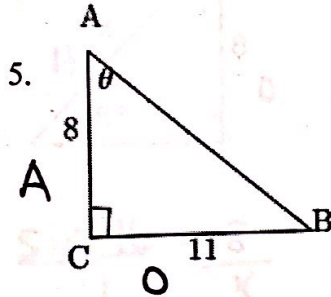
$$\cos \theta = \frac{6}{9}$$

Trig ratio: cosine  
 $\theta = \underline{48.2^\circ}$



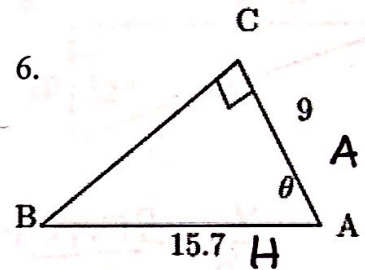
$$\cos \theta = \frac{9.3}{13.2}$$

Trig ratio: cosine  
 $\theta = \underline{45.2^\circ}$



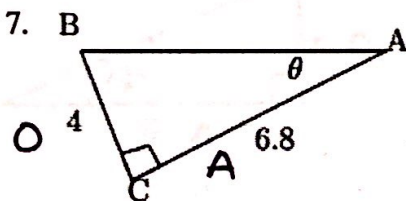
$$\tan \theta = \frac{11}{8}$$

Trig ratio: tangent  
 $\theta = \underline{54.0^\circ}$



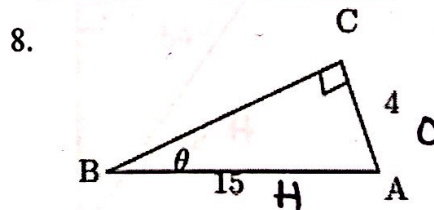
$$\cos \theta = \frac{9}{15.7}$$

Trig ratio: cosine  
 $\theta = \underline{55.0^\circ}$



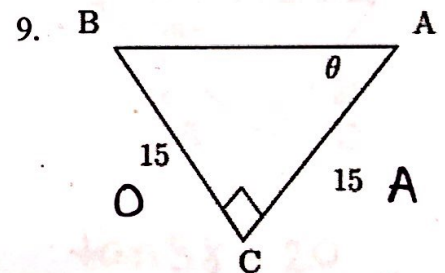
$$\tan \theta = \frac{4}{6.8}$$

Trig ratio: tangent  
 $\theta = \underline{30.5^\circ}$



$$\sin \theta = \frac{4}{15}$$

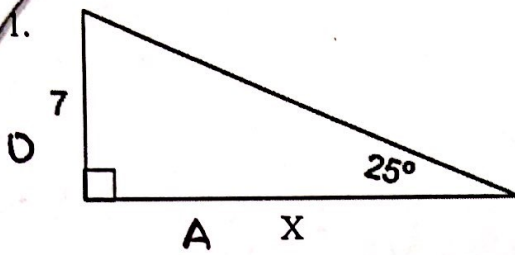
Trig ratio: sine  
 $\theta = \underline{15.5^\circ}$



$$\tan \theta = \frac{15}{15}$$

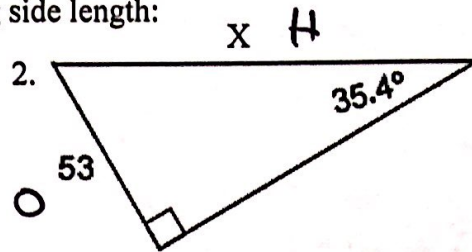
Trig ratio: tangent  
 $\theta = \underline{45^\circ}$

2: Cross multiply to solve for a missing side length:



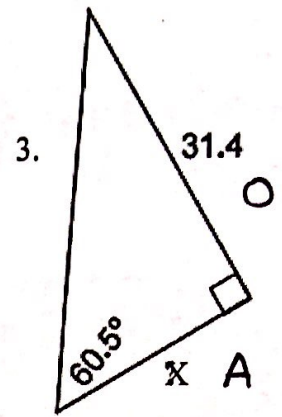
$$\frac{\tan 25}{1} = \frac{7}{X}$$

Trig ratio: tangent  
X = 15.0



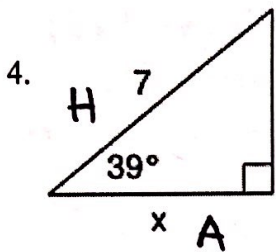
$$\frac{\sin 35.4}{1} = \frac{53}{X}$$

Trig ratio: sine  
X = 91.5



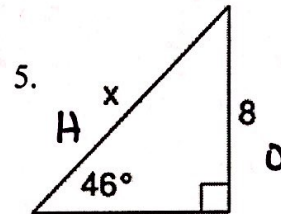
$$\frac{\tan 60.5}{1} = \frac{31.4}{X}$$

Trig ratio: tangent  
X = 17.8



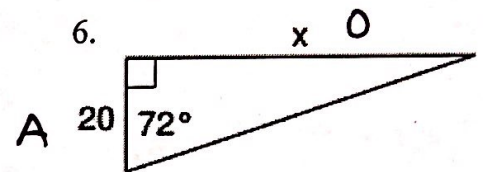
$$\frac{\cos 39}{1} = \frac{X}{7}$$

Trig ratio: cosine  
X = 5.4



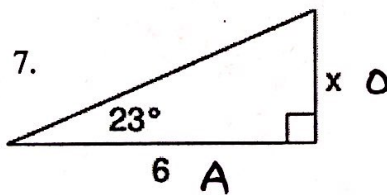
$$\frac{\sin 46}{1} = \frac{8}{X}$$

Trig ratio: sine  
X = 11.1



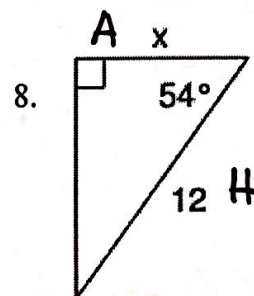
$$\frac{\tan 72}{1} = \frac{X}{20}$$

Trig ratio: tangent  
X = 61.6



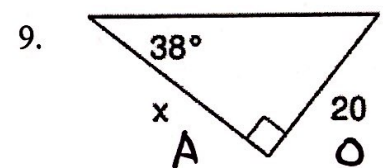
$$\frac{\tan 23}{1} = \frac{X}{6}$$

Trig ratio: tangent  
X = 2.5



$$\frac{\cos 54}{1} = \frac{X}{12}$$

Trig ratio: cosine  
X = 7.1



$$\frac{\tan 38}{1} = \frac{20}{X}$$

Trig ratio: tangent  
X = 25.6