

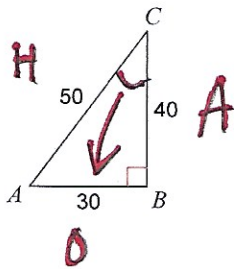
# Ch 8 Trig Quiz

Name Key

Class \_\_\_\_\_

Find the value of each trigonometric ratio.

1)  $\cos C$

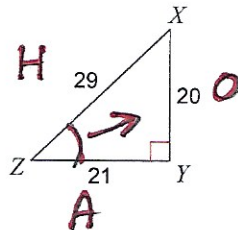


$$\cos X = \frac{A}{H}$$

$$\cos X = \frac{40}{50}$$

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

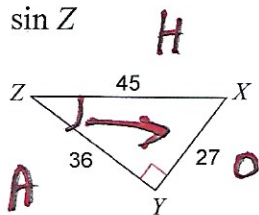
2)  $\sin Z$



$$\sin Z = \frac{O}{H}$$

$$\sin Z = \frac{20}{29}$$

3)  $\sin Z$

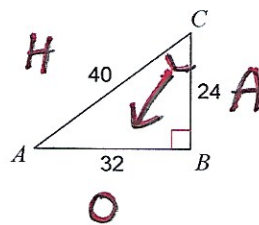


$$\sin Z = \frac{O}{H}$$

$$\sin Z = \frac{27}{45}$$

$$= \frac{3}{5}$$

4)  $\tan C$

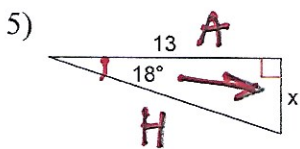


$$\tan C = \frac{O}{A}$$

$$\tan C = \frac{32}{24}$$

$$= \frac{4}{3}$$

Find the missing side. Round to the nearest tenth.

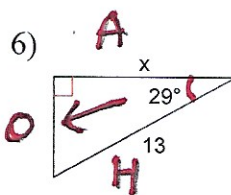


$$\tan \theta = \frac{O}{A}$$

$$\tan 18 = \frac{x}{13}$$

$$13 \cdot \tan 18 = x$$

$$\boxed{4.2} = x$$

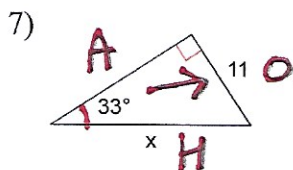


$$\cos \theta = \frac{A}{H}$$

$$\cos 29 = \frac{x}{13}$$

$$13 \cdot \cos 29 = x$$

$$\boxed{11.4} = x$$



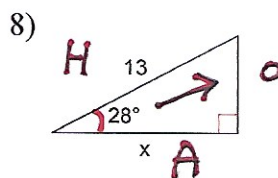
$$\sin \theta = \frac{O}{H}$$

$$\sin 33 = \frac{11}{x}$$

$$x \sin 33 = 11$$

$$x = \frac{11}{\sin 33}$$

$$x = \boxed{20.2}$$



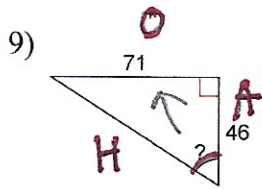
$$\cos \theta = \frac{A}{H}$$

$$\cos 28 = \frac{x}{13}$$

$$13 \cos 28 = x$$

$$\boxed{11.5} = x$$

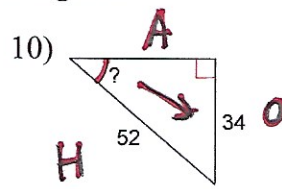
Find the measure of the indicated angle to the nearest degree.



$$\tan^{-1}\left(\frac{O}{A}\right) = X$$

$$\tan^{-1}\left(\frac{71}{46}\right) = X$$

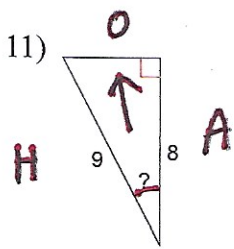
$$\boxed{57^\circ} = X$$



$$\sin^{-1}\left(\frac{O}{H}\right) = X^\circ$$

$$\sin^{-1}\left(\frac{34}{52}\right) = X^\circ$$

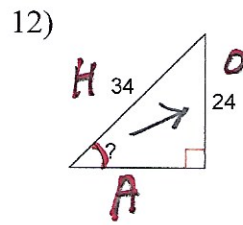
$$\boxed{41^\circ} = X^\circ$$



$$\cos^{-1}\left(\frac{A}{H}\right) = X$$

$$\cos^{-1}\left(\frac{8}{9}\right) = X$$

$$\boxed{27^\circ} = X$$



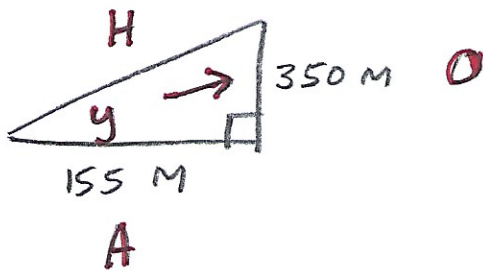
$$\sin^{-1}\left(\frac{O}{H}\right) = X$$

$$\sin^{-1}\left(\frac{24}{34}\right) = X$$

$$\boxed{45^\circ} = X$$

Make a sketch and solve.

- 13) Find the angle of elevation to the peak of a mountain for an observer who is 155 meters from the mountain and the mountain is 350 meters tall.



$$\tan^{-1}\left(\frac{O}{H}\right) = X$$

$$\tan^{-1}\left(\frac{350}{155}\right) = X$$

$$\boxed{66.1^\circ} = X$$