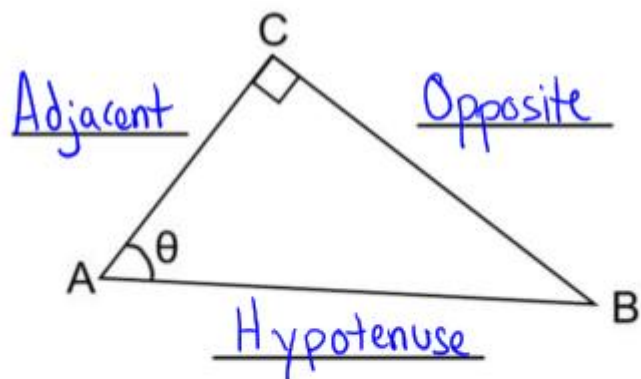


Right Triangle Trigonometry



$$\sin(\theta) = \frac{\text{opp}}{\text{Hyp}}$$

$$\cos(\theta) = \frac{\text{Adj}}{\text{Hyp}}$$

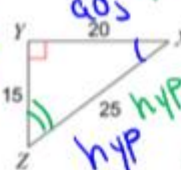
$$\tan(\theta) = \frac{\text{opp}}{\text{Adj}}$$

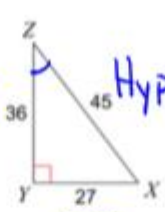
SOH

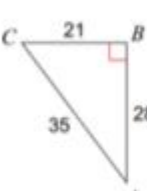
CAH

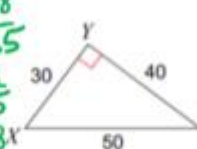
TOA

Find the value of the sine, cosine, and tangent of both acute angles in each triangle.

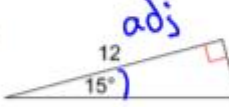
1)  $\sin(x) = \frac{15}{25}$
 $\cos(x) = \frac{20}{25}$
 $\tan(x) = \frac{15}{20}$
 $\sin(z) = \frac{20}{25}$
 $\cos(z) = \frac{15}{25}$
 $\tan(z) = \frac{20}{15}$

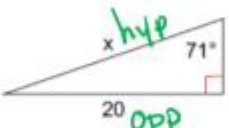
2)  $\sin(z) = \frac{27}{45}$
 $\cos(z) = \frac{36}{45}$
 $\tan(z) = \frac{27}{36}$
 $\sin(x) = \frac{36}{45}$
 $\cos(x) = \frac{27}{45}$
 $\tan(x) = \frac{36}{27}$

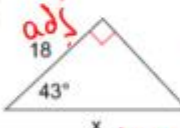
3)  $\sin(A) = \frac{21}{35}$
 $\cos(A) = \frac{28}{35}$
 $\tan(A) = \frac{21}{28}$

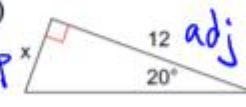
4)  $\sin(x) = \frac{40}{50}$
 $\cos(x) = \frac{30}{50}$
 $\tan(x) = \frac{40}{30}$
 $\sin(z) = \frac{30}{50}$
 $\cos(z) = \frac{40}{50}$
 $\tan(z) = \frac{30}{40}$

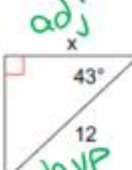
Find the missing side. Round to the nearest tenth.

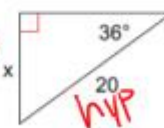
5)  $\tan(15) = \frac{x}{12}$
 $x = 12 \cdot \tan(15) = 3.2$

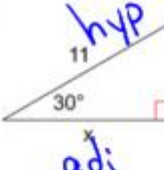
6)  $\sin(71) = \frac{20}{x}$
 $x = \frac{20}{\sin(71)} = 21.2$


7)  $\cos(43) = \frac{18}{x}$
 $x = \frac{18}{\cos(43)} = 24.6$

8)  $\tan(20) = \frac{x}{12}$
 $x = 12 \cdot \tan(20) = 4.4$

9)  $\cos(43) = \frac{x}{12}$
 $x = 12 \cos(43) = 8.8$

10)  $\sin(36) = \frac{x}{20}$
 $x = 20 \cdot \sin(36) = 11.8$

11)  $\cos(30) = \frac{x}{11}$
 $x = 11 \cdot \cos(30) = 9.5$

12)  $\sin(54) = \frac{12}{x}$
 $x = \frac{12}{\sin(54)} = 14.8$