



Finding the Unknown



$$1. a) \cos \theta = \frac{a}{h}$$

$$\cos \theta = \frac{14}{20}$$

$$\theta = 46^\circ$$

$$b) \sin \theta = \frac{a}{h}$$

$$\sin \theta = \frac{10}{13}$$

$$\theta = 50^\circ$$

$$c) \tan \theta = \frac{a}{b}$$

$$\tan \theta = \frac{11}{4}$$

$$\theta = 70^\circ$$

$$d) \sin \theta = \frac{a}{h}$$

$$\sin \theta = \frac{8}{17}$$

$$\theta = 28^\circ$$

$$e) \tan \theta = \frac{a}{b}$$

$$\tan \theta = \frac{12}{9}$$

$$\theta = 53^\circ$$

$$f) \sin \theta = \frac{a}{h}$$

$$\sin \theta = \frac{26}{51}$$

$$\theta = 57^\circ$$

$$g) \tan \theta = \frac{a}{b}$$

$$\tan \theta = \frac{16}{17}$$

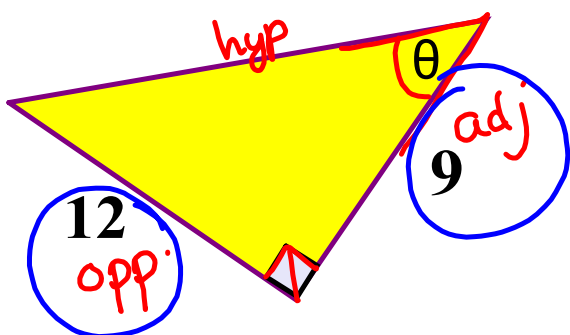
$$\theta = 43^\circ$$

$$h) \cos \theta = \frac{a}{h}$$

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

$$\theta = 37^\circ$$

Find the value of theta.



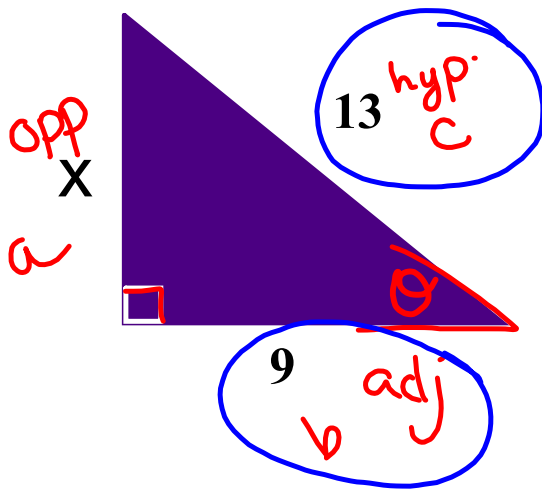
$$\tan \theta = \frac{o}{a}$$

$$\tan \theta = \frac{12}{9}$$

$$\tan \theta = 1.333\bar{3}$$

$$\theta = 53^\circ$$

- a) Using the proper trig ratio, find theta.
 b) Find the missing side x.



$$\begin{aligned}
 a^2 &= c^2 - b^2 \\
 a^2 &= 13^2 - 9^2 \\
 a^2 &= 169 - 81 \\
 a^2 &= 88 \\
 a &= 9.4
 \end{aligned}$$

$$\begin{aligned}
 c^2 &= a^2 + b^2 \\
 a^2 &= c^2 - b^2
 \end{aligned}$$

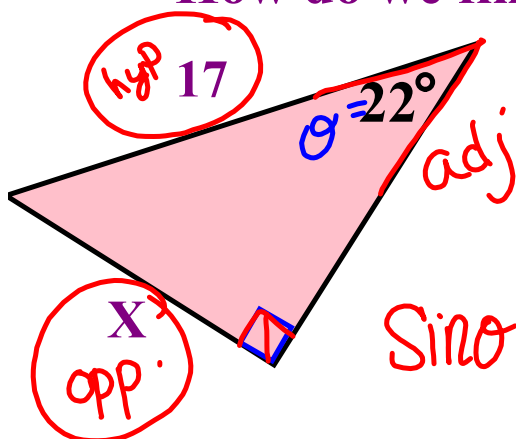
$$\cos \theta = \frac{a}{h}$$

$$\cos \theta = \frac{9}{13}$$

$$\cos \theta = 0.6923$$

$$\theta = 46^\circ$$

How do we find the missing side ????



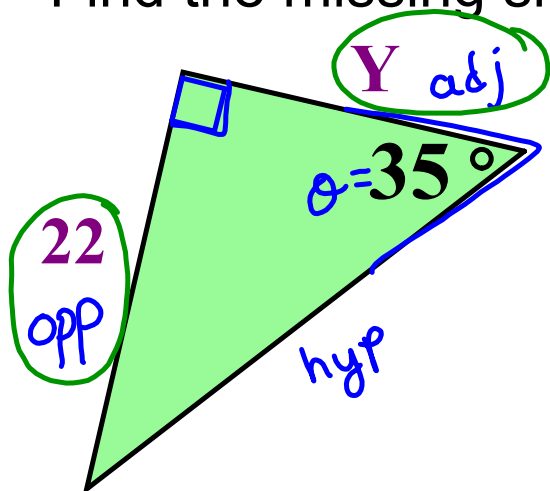
$$\sin \theta = \frac{o}{h}$$

$$\frac{\sin 22^\circ}{1} = \frac{X}{17}$$

$$\frac{0.3746}{1} = \frac{X}{17}$$

$$X = 6.4$$

Find the missing side y



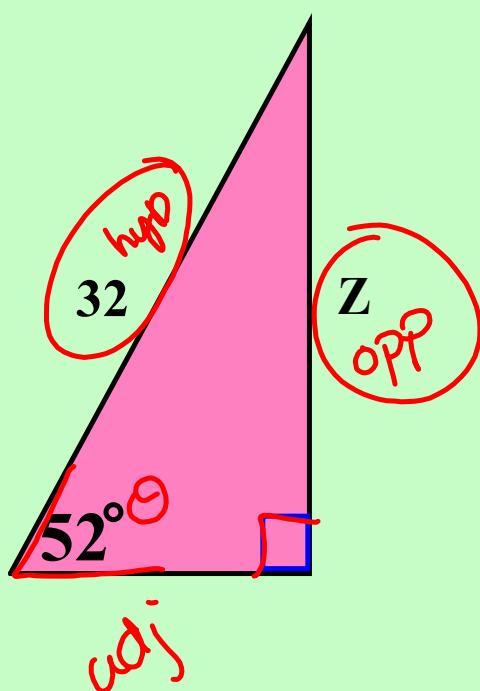
$$\frac{\tan \theta}{1} = \frac{O}{a}$$

$$\frac{\tan 35^\circ}{1} = \frac{22}{y}$$

$$\frac{0.7002}{1} = \frac{22}{y}$$

$$\frac{0.7002y}{0.7002} = \frac{22}{0.7002}$$

$$y = 31.4$$



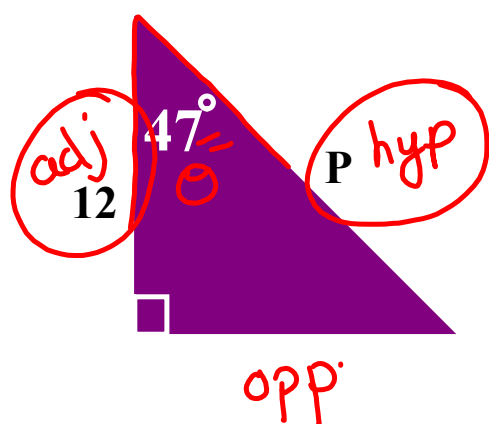
$$\sin \theta = \frac{o}{h}$$

$$\frac{\sin 52^\circ}{1} = \frac{z}{32}$$

$$\frac{0.7880}{1} = \frac{z}{32}$$

$$z = 25.2$$

You Try :)



$$\cos \theta = \frac{a}{h}$$

$$\cos 47^\circ = \frac{12}{p}$$

$$\frac{0.6820}{1} = \frac{12}{p}$$

$$\frac{0.6820p}{0.6820} = \frac{12}{0.6820}$$

$$p = 17.6$$

