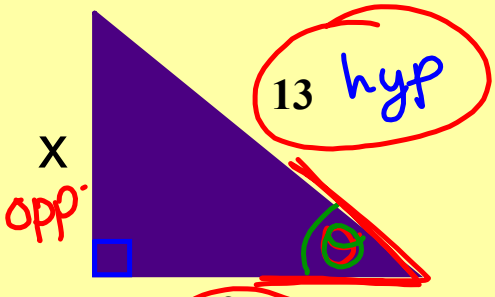
? ? ? ? ? ?
Finding the Unknown
? ? ? ? ? ?

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



$a^2+b^2=c^2$

$a^2+9^2=13^2$

$a^2+81=169-81$

$\sqrt{a^2}=\sqrt{88}$

$a=9.4$

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

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

$\cos\theta=0.6923$

$\theta=46°$

Find the missing side y

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

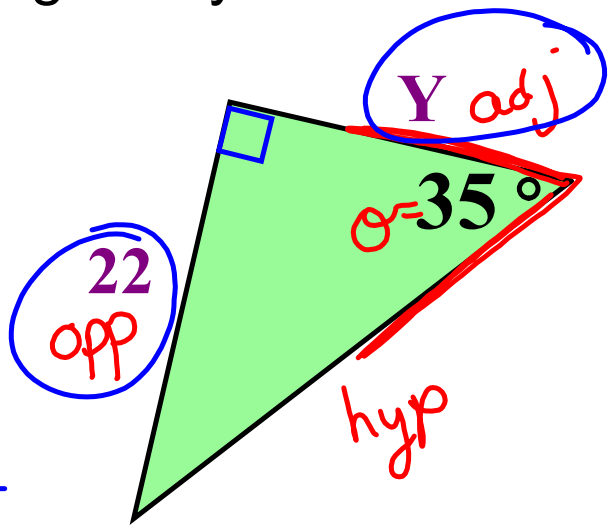
$\frac{\tan 35^\circ}{1} = \frac{22}{y}$

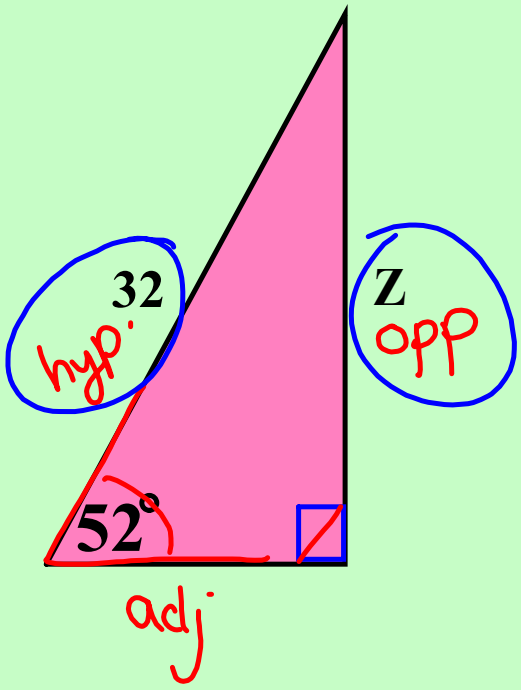
$\frac{0.7002}{1} = \frac{22}{y}$

$0.7002y = 22$

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

$y = 31.4$





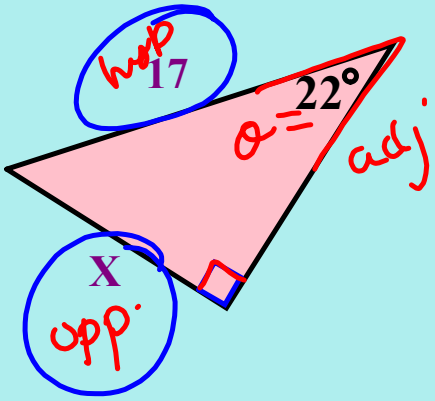
$\sin\theta = \frac{o}{h}$

$\frac{\sin 52°}{1} = \frac{z}{32}$

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

$z = 25.2$

How do we find the missing side ????



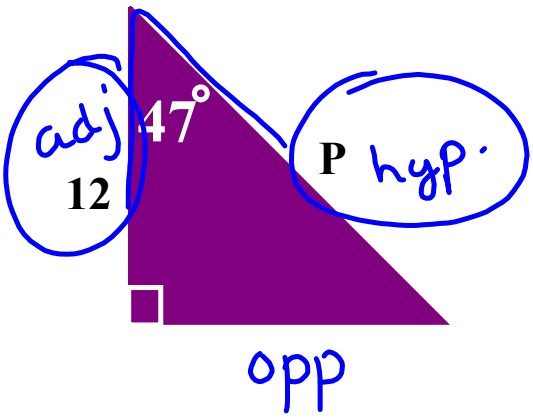
$\sin\theta = \frac{o}{h}$

$\frac{\sin 22}{1} = \frac{x}{17}$

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

$x = 6.4$

You Try :)



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

$\frac{\cos 47^\circ}{1} = \frac{12}{p}$

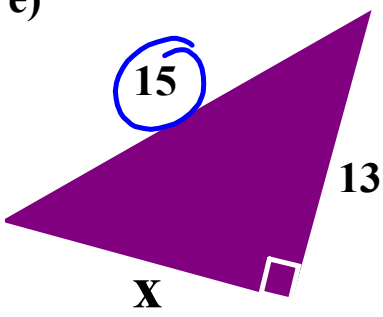
$\frac{0.6820}{1} = \frac{12}{p}$

$0.6820p = 12$

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

$p = 17.6$

e)



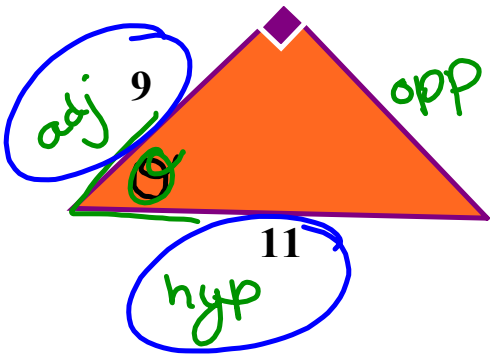
$a^2 + b^2 = c^2$ (hyp)

$a^2 + 13^2 = 15^2$

$a^2 + 169 = 225 - 169$

$\sqrt{a^2} = \sqrt{56}$

$a = 7.5$



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

$\cos\theta = \frac{9}{11}$

$\cos\theta = 0.8182$

$\theta = 35°$