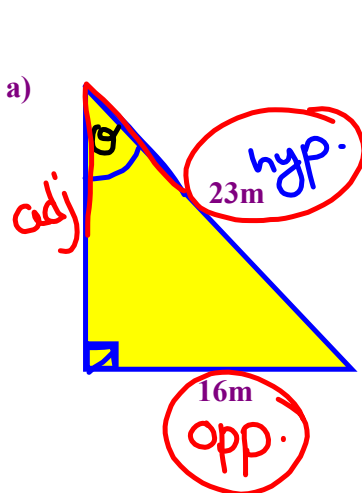


## Warm Up Questions

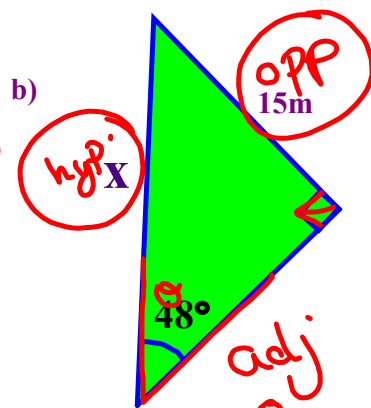


$$\sin \theta = \frac{o}{h}$$

$$\sin \theta = \frac{16}{23}$$

$$\sin \theta = 0.6957$$

$$\theta = 44^\circ$$

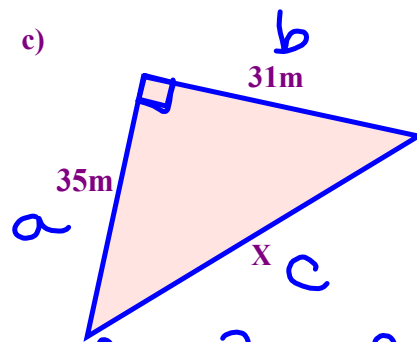


$$\sin \theta = \frac{o}{h}$$

$$\sin 48 = \frac{15}{X}$$

$$\frac{0.7431}{1} = \frac{15}{X}$$

$$\frac{0.7431 X}{0.7431} = \frac{15}{0.7431}$$



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

$$35^2 + 31^2 = c^2$$

$$1225 + 961 = c^2$$

$$\sqrt{2186} = \sqrt{c^2}$$

$$X = 20.2 \quad 46.8 = c$$

Find x or theta for each of the following:

$\cos \theta = \frac{a}{h}$   
 $\cos \theta = \frac{10}{16}$  opp  
 $\cos \theta = 0.625$   
 $\theta = 51^\circ$

b)  $a^2 + b^2 = c^2$   
 $5^2 + 10^2 = x^2$   
 $25 + 100 = x^2$   
 $125 = x^2$   
 $x = 11.2$

$\tan \theta = \frac{opp}{adj}$   
 $\tan \theta = \frac{x}{6}$   
 $0.8391 = \frac{x}{6}$   
 $x = 5.0$

$\sin \theta = \frac{opp}{hyp}$   
 $0.3236 = \frac{x}{11}$   
 $x = 3.6$

$\cos 35^\circ = \frac{adj}{hyp}$   
 $0.9174 = \frac{10}{x}$   
 $0.9174x = 10$   
 $x = 11$

$a^2 + b^2 = c^2$   
 $17^2 + 11^2 = x^2$   
 $289 + 121 = x^2$   
 $c^2 = 410$   
 $c = 20.2$

$\tan \theta = \frac{opp}{adj}$   
 $\tan \theta = \frac{11}{15}$   
 $\theta = 36^\circ$

$\sin \theta = \frac{opp}{hyp}$   
 $\sin \theta = \frac{16}{21}$   
 $\sin \theta = 0.7619$   
 $\theta = 50^\circ$

$\cos \theta = \frac{adj}{hyp}$   
 $\cos \theta = \frac{7}{13}$   
 $\theta = 57^\circ$

$\tan 32^\circ = \frac{opp}{adj}$   
 $0.6249 = \frac{x}{18}$   
 $0.6249x = 11.2$

$a^2 + b^2 = c^2$   
 $15^2 + 11^2 = x^2$   
 $225 + 121 = x^2$   
 $x = 18.6$

$\tan 39^\circ = \frac{opp}{adj}$   
 $0.8099 = \frac{44}{x}$   
 $x = 54.3$

$a^2 + b^2 = c^2$   
 $x^2 + 7^2 = 8^2$   
 $x^2 + 49 = 64$   
 $x^2 = 15$   
 $x = 3.9$

