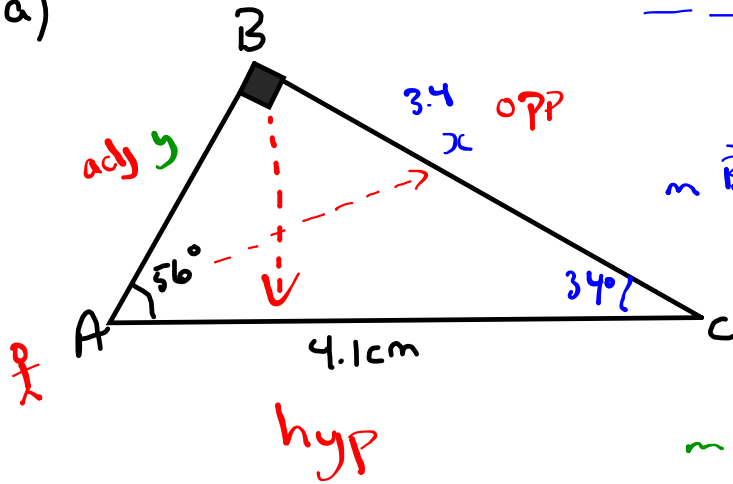


Prob #3

a)



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$\angle BCA = 34^\circ$

m \overline{BC} : $\frac{\sin 56^\circ}{1} = \frac{x}{4.1}$

$(\sin 56^\circ)(4.1) = x$
 $3.4 = x$

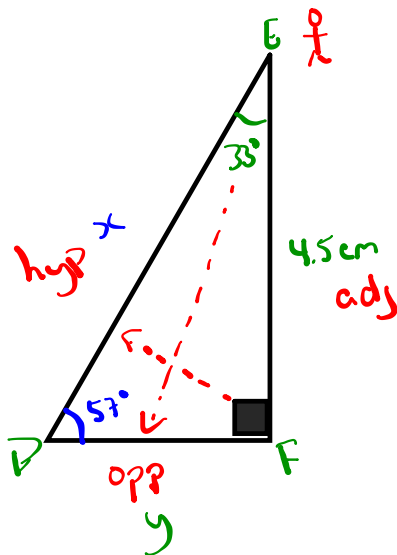
m \overline{AB} : $\frac{\cos 56^\circ}{1} = \frac{y}{4.1}$

or
 $\frac{\sin 34^\circ}{1} = \frac{y}{4.1}$

$y = 2.3$

$\tan 56^\circ = \frac{3.4}{y}$ or

b)



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$\angle EDF = 57^\circ$

m \overline{DE} : $\frac{\cos 33^\circ}{1} = \frac{4.5}{x}$

$\frac{(\cos 33^\circ)x}{\cos 33^\circ} = \frac{4.5}{\cos 33^\circ}$

$x = 5.4$

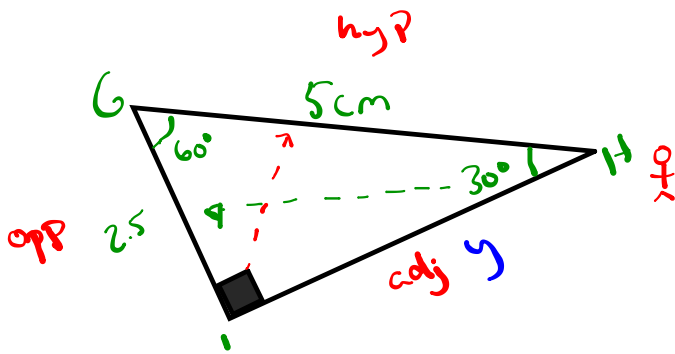
m \overline{DF} : $\tan 33^\circ = \frac{y}{4.5}$

$y = 2.9$

c)

30°-60°-90°

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$\angle GHI = 30^\circ$

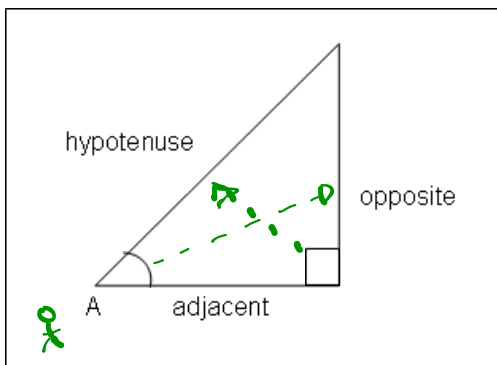
$$\sin 30^\circ = \frac{x}{5}$$

$$x = 2.5$$

$$\cos 30^\circ = \frac{y}{5}$$

$$y = 4.3$$

Trigonometric Ratios in a Right Δ *soh cah toa*



$$\underline{\sin} A = \frac{\underline{opp}}{\underline{hyp}}$$

$$\underline{\cos} A = \frac{\underline{adj}}{\underline{hyp}}$$

$$\underline{\tan} A = \frac{\underline{opp}}{\underline{adj}}$$

Finding Missing Angles using Trig Ratios

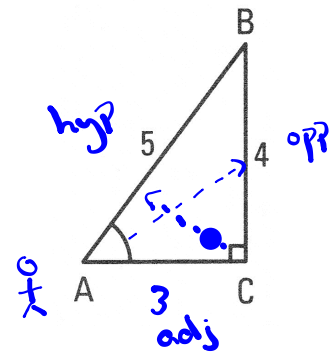
Example 1:

1) Find the measure of angle BAC

$\theta = \text{Angle}$

$$\sin^{-1}\left(\sin \angle BAC\right) = \left(\frac{4}{5}\right) \sin^{-1}$$

$$\begin{aligned} \angle BAC &= \sin^{-1}\left(\frac{4}{5}\right) \\ &= 53^\circ \end{aligned}$$



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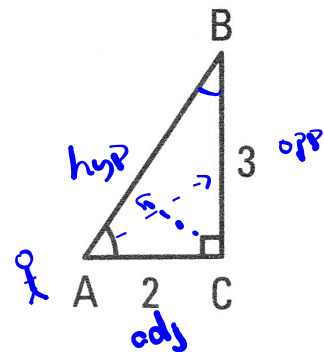
Example 2:

1) Find the measure of angle BAC

$$\tan \theta = \frac{3}{2}$$

$$\theta = \tan^{-1}\left(\frac{3}{2}\right)$$

$$\theta = 56^\circ$$



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