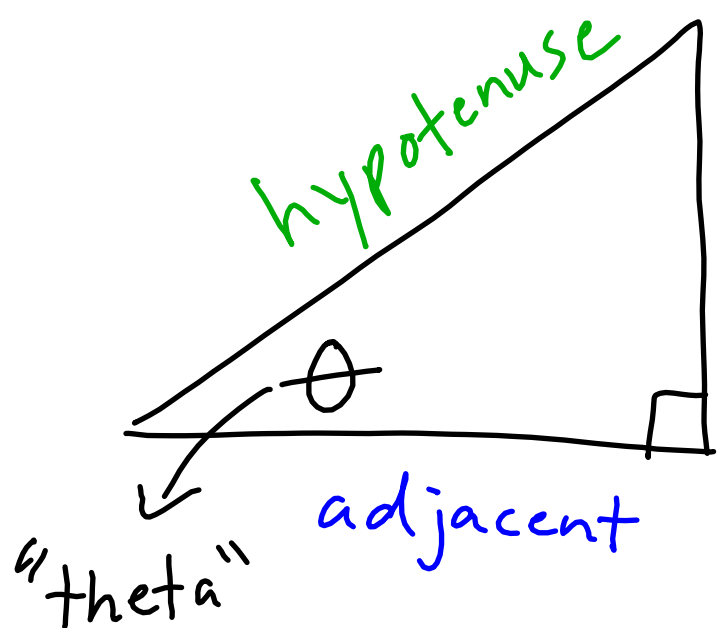
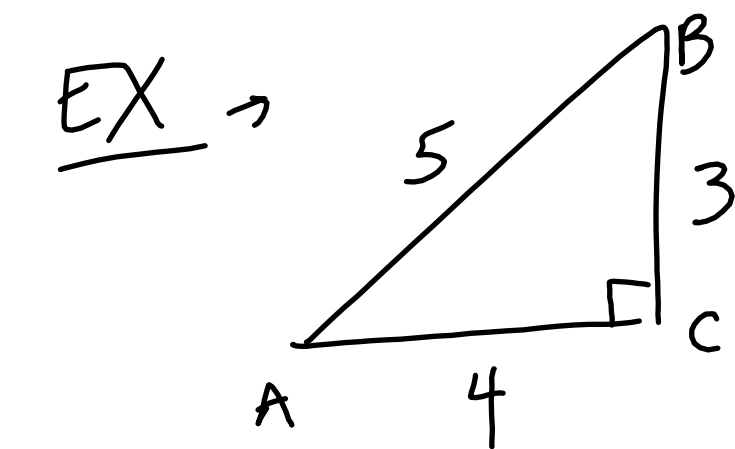


Trigonometry



opposite



$$\sin A = \frac{3}{5}$$

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

$$\tan A = \frac{3}{4}$$

$$\sin B = \frac{4}{5}$$

$$\cos B = \frac{3}{5}$$

$$\tan B = \frac{4}{3}$$

"sine"

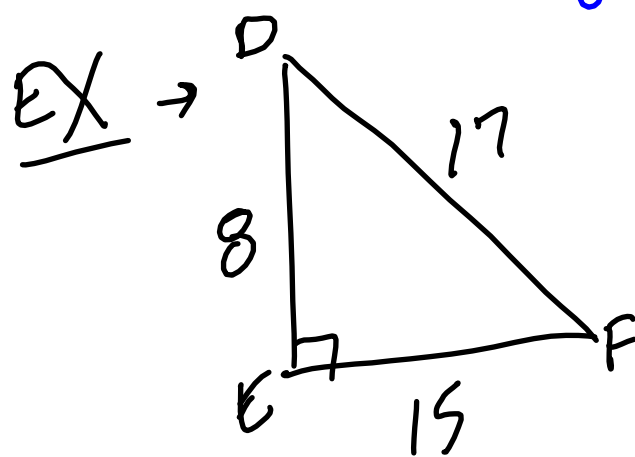
$$\sin \theta = \frac{\text{opp}}{\text{hyp}}$$

"cosine"

$$\cos \theta = \frac{\text{adj}}{\text{hyp}}$$

"tangent"

$$\tan \theta = \frac{\text{opp}}{\text{adj}}$$



$$\sin D = \frac{15}{17}$$

$$\cos D = \frac{8}{17}$$

$$\tan D = \frac{15}{8}$$

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

$$\cos F = \frac{15}{17}$$

$$\tan F = \frac{8}{15}$$

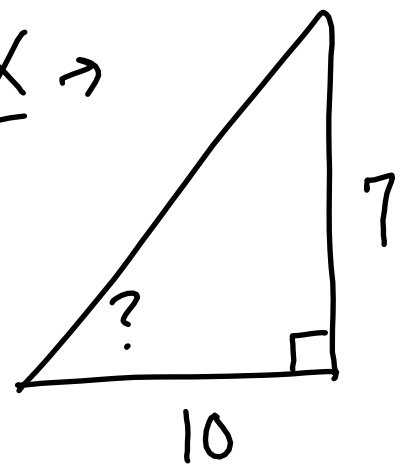
S O C A T O
H H A A

- Finding Angle Measures

↳ use inverse trig functions (\sin^{-1} , \cos^{-1} , \tan^{-1})

S O H (A H T O A

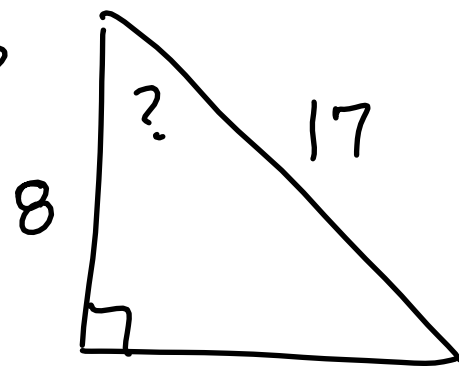
EX →



$$? = \tan^{-1}\left(\frac{7}{10}\right)$$

$$? = 34.992^\circ$$

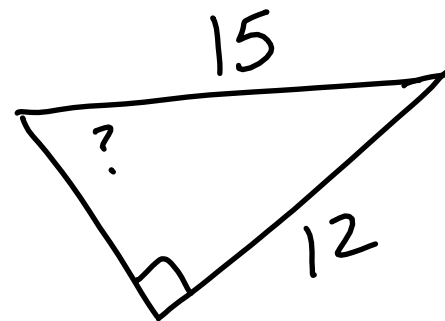
EX →



$$? = \cos^{-1}\left(\frac{8}{17}\right)$$

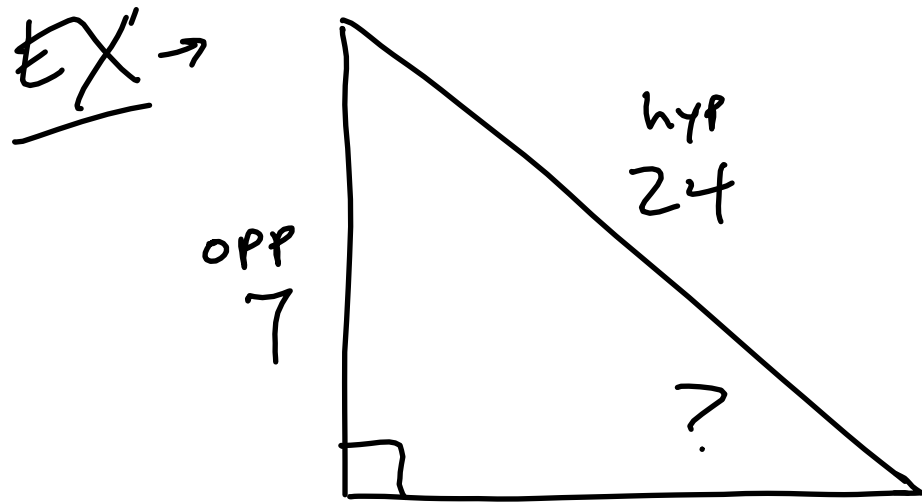
$$? = 61.928^\circ$$

EX →



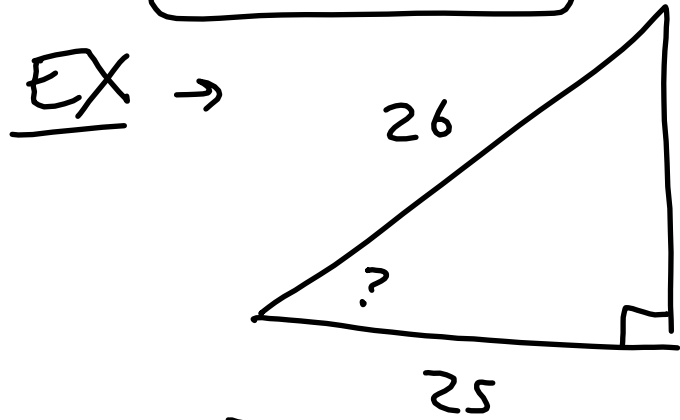
$$? = \sin^{-1}\left(\frac{12}{15}\right)$$

$$? = 53.130^\circ$$



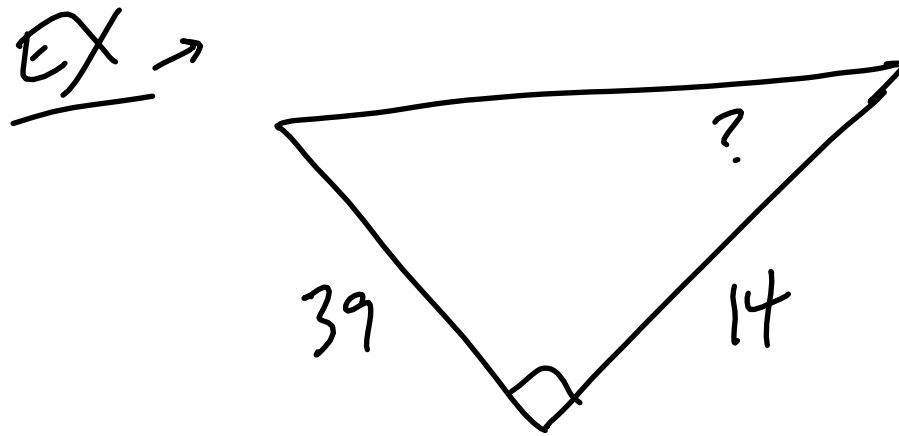
$$? = \sin^{-1}\left(\frac{7}{24}\right)$$

$$? = 16.958^\circ$$



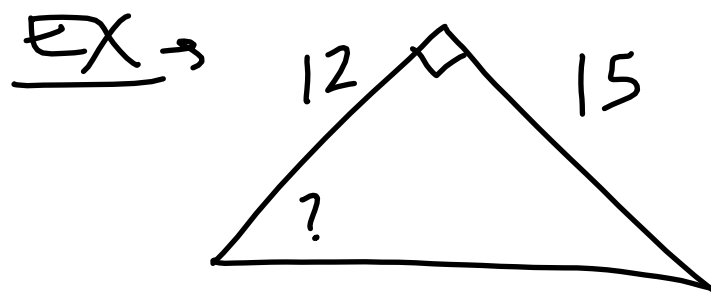
$$? = \cos^{-1}\left(\frac{25}{26}\right)$$

$$? = 15.942^\circ$$



$$? = \tan^{-1}\left(\frac{39}{14}\right)$$

$$? = 70.253^\circ$$



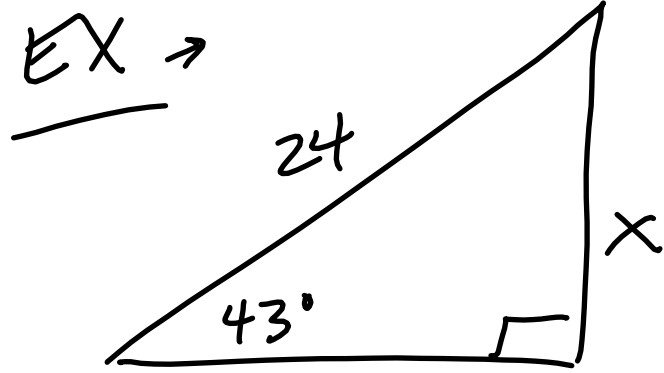
$$? = \tan^{-1}\left(\frac{15}{12}\right)$$

$$? = 51.340^\circ$$

S
H C
H T
A

- Finding Missing Sides

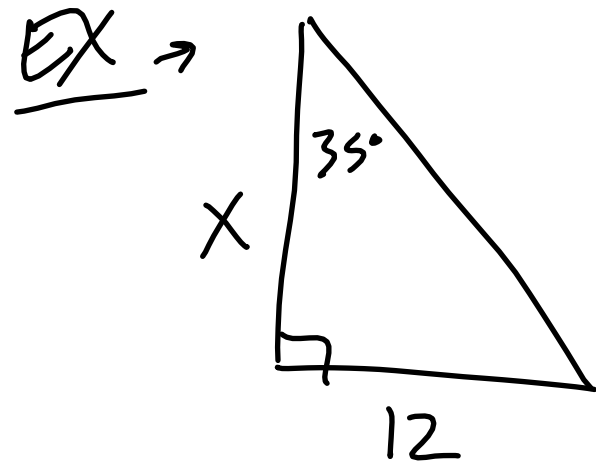
S O C A T O
H H H A



$$\sin 43^\circ = \frac{x}{24}$$

$$24 \cdot 0.682 = \frac{x}{24} \cdot 24$$

$$16.368 = x$$

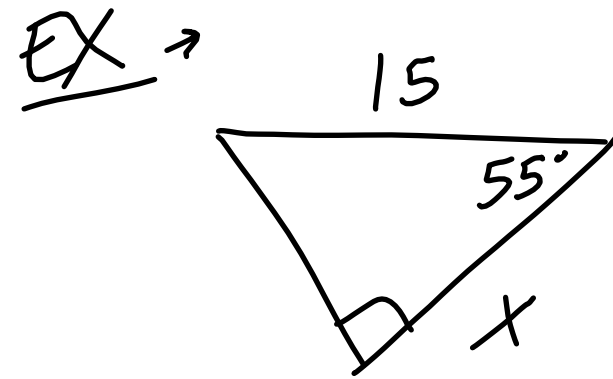


$$\tan 35^\circ = \frac{12}{x}$$

$$x \cdot 0.700 = \frac{12}{x} \cdot x$$

$$\frac{0.700x}{0.700} = \frac{12}{0.700}$$

$$x = \frac{12}{0.700} = 17.143$$

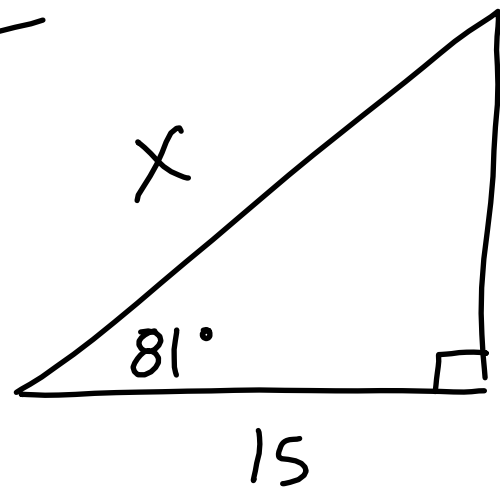


$$\cos 55^\circ = \frac{x}{15}$$

$$15 \cdot 0.574 = \frac{x}{15} \cdot 15$$

$$8.61 = x$$

EX →



$$\cos 81^\circ = \frac{15}{x}$$

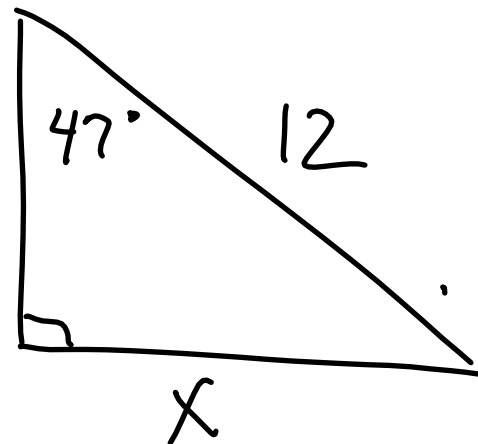
$$0.156 = \frac{15}{x}$$

$$x = \frac{15}{0.156}$$

$$x = 96.154$$

S $\frac{O}{H}$ C $\frac{A}{H}$ T $\frac{O}{A}$

EX →



$$\sin 47^\circ = \frac{x}{12}$$

$$12 \cdot 0.731 = \frac{x}{12} \cdot 12$$

$$8.772 = x$$

S $\frac{O}{H}$ C $\frac{A}{H}$ T $\frac{O}{A}$

HW: p. 510 → 11-27