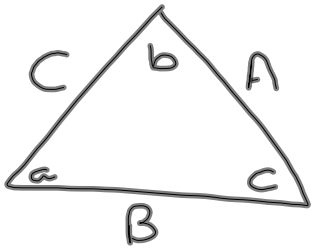
2-24-14

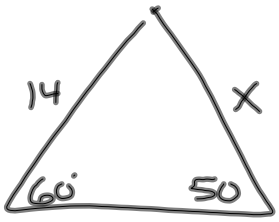
3rd Trig

Law of Sines



$$\frac{\sin a}{A} = \frac{\sin b}{B} = \frac{\sin C}{C}$$

(1)

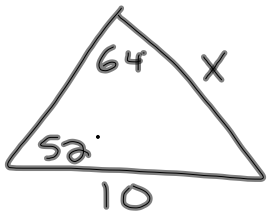


$$\frac{\sin 50^\circ}{14} = \frac{\sin 60}{X}$$

$$\frac{X \cdot \sin 50^\circ}{\sin 50} = \frac{14 \cdot \sin(60)}{\sin(60)}$$

$$X \approx 15.8$$

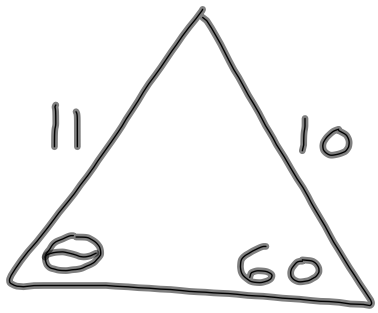
(2)



$$\frac{\sin 52^\circ}{X} = \frac{\sin 64}{10}$$

$$\frac{X \cdot \sin 64}{\sin 64} = \frac{10 \cdot \sin 52}{\sin 64}$$

$$X \approx 8.8$$

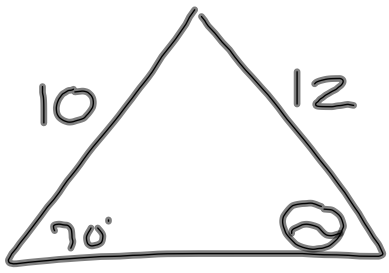


$$\frac{\sin\theta}{10} = \frac{\sin 60}{11}$$

$$\frac{11 \cdot \sin\theta}{11} = \frac{10 \cdot \sin 60^\circ}{11}$$

$$\sin^{-1} \cdot \sin\theta \approx \sin^{-1} .78729\ldots$$

$$\theta \approx 51.9^\circ$$

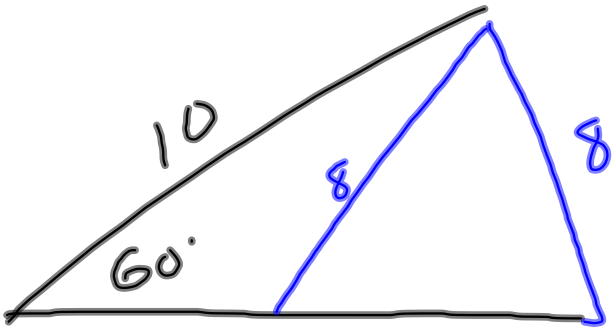


$$\frac{\sin 70^\circ}{12} = \frac{\sin\theta}{10}$$

$$\frac{12 \cdot \sin\theta}{12} = \frac{10 \cdot \sin 70^\circ}{12}$$

$$\sin^{-1} \sin\theta = \sin^{-1} .78307\ldots$$

$$\theta \approx 51.5^\circ$$

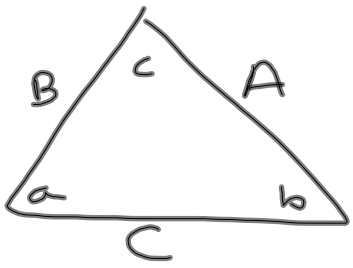


3rd leg is 8

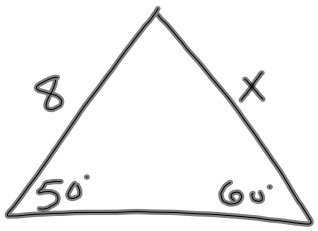
2-24-14

4th Trig

Law of Sines



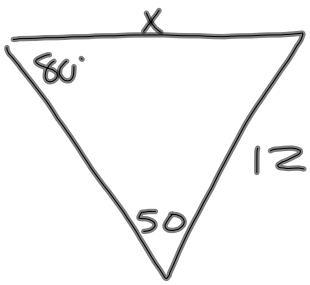
$$\frac{\sin a}{A} = \frac{\sin b}{B} = \frac{\sin c}{C}$$



$$\frac{\sin 50}{X} = \frac{\sin 60}{8}$$

$$\frac{X \cdot \sin 60^\circ}{\sin 60^\circ} = \frac{8 \sin 50^\circ}{\sin 60^\circ}$$

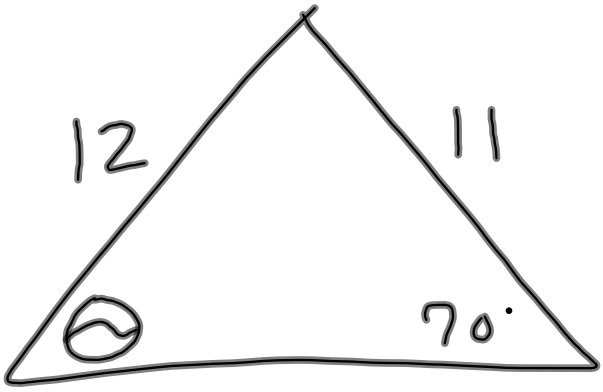
$$X \approx 7.1$$



$$\frac{\sin 50^\circ}{X} = \frac{\sin 80^\circ}{12}$$

$$\frac{X \cdot \sin 80^\circ}{\sin 80^\circ} = \frac{12 \sin 50^\circ}{\sin 80^\circ}$$

$$X \approx 9.3$$

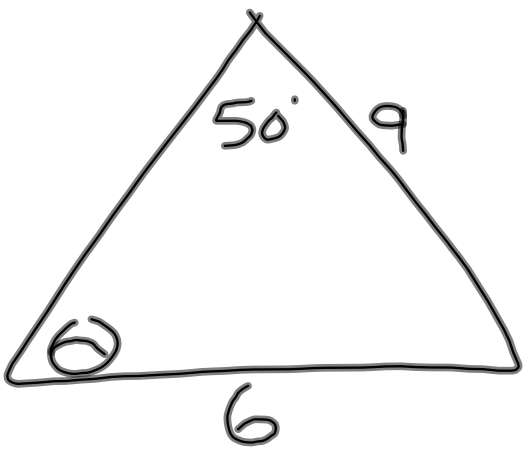


$$\frac{\sin\theta}{11} = \frac{\sin 70}{12}$$

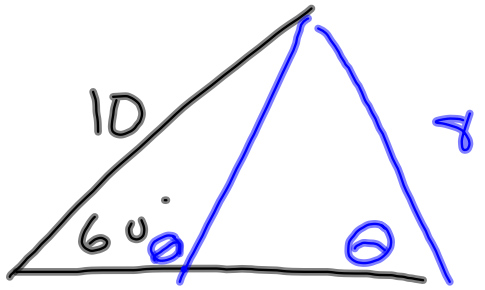
$$\frac{12 \cdot \sin\theta}{12} = \frac{11 \cdot \sin 70^\circ}{12}$$

$$\sin^{-1} \sin\theta \approx \sin^{-1} .8613\ldots$$

$$\theta \approx 59.5^\circ$$



domain error



8 feet leg