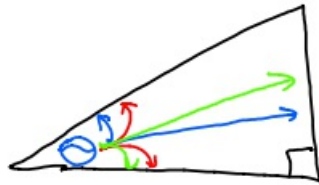
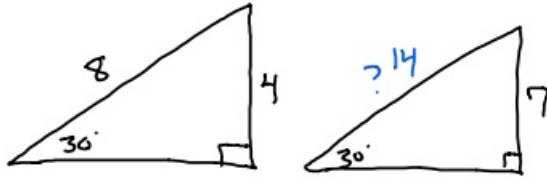


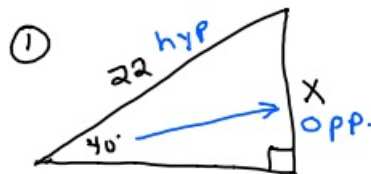
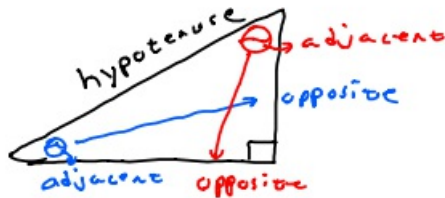
2-12-20 1<sup>st</sup> Trig

2-4      3-5  
1            1  
2            2  
3            3  
4            4  
5            5

---



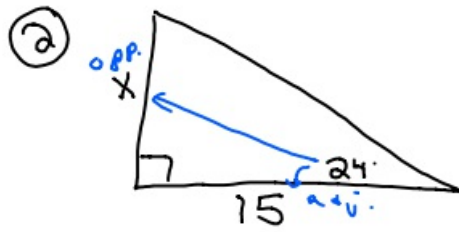
SOH CAH TOA  
 $\sin \theta = \frac{\text{opp.}}{\text{hyp.}}$      $\cos \theta = \frac{\text{adj.}}{\text{hyp}}$      $\tan \theta = \frac{\text{opp.}}{\text{adj.}}$



SOH  
CAH  
TOA

$$\frac{\sin 40^\circ}{1} = \frac{X}{22}$$

$$X = 22 \cdot \sin 40^\circ$$
$$X \approx 14.1$$

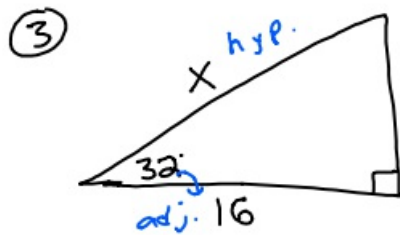


SOH  
CAH  
TOA

$$\frac{\tan 24^\circ}{1} = \frac{x}{15}$$

$$x = 15 \cdot \tan 24^\circ$$

$$x \approx 6.7$$

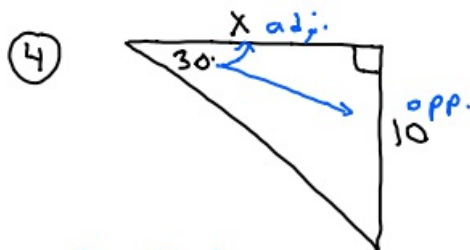


SOH  
CAH  
TOA

$$\frac{\cos 32^\circ}{1} = \frac{16}{x}$$

$$\frac{x \cdot \cos 32^\circ}{\cancel{\cos 32^\circ}} = \frac{16}{\cancel{\cos 32^\circ}}$$

$$x \approx 19.9$$



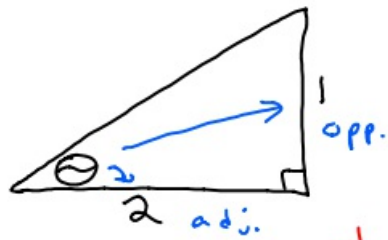
SOH  
CAH  
TOA

$$\frac{\tan 30^\circ}{1} = \frac{10}{x}$$

$$\frac{x \cdot \tan 30^\circ}{\cancel{\tan 30^\circ}} = \frac{10}{\cancel{\tan 30^\circ}}$$

$$x \approx 17.3$$

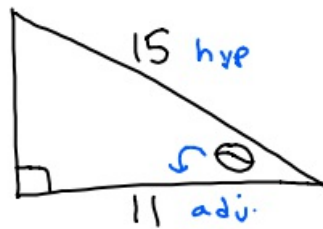
Next section



$$\cancel{\tan^{-1}} \tan \theta = \tan^{-1} .5$$

$$\theta \approx 26.6^\circ$$

①

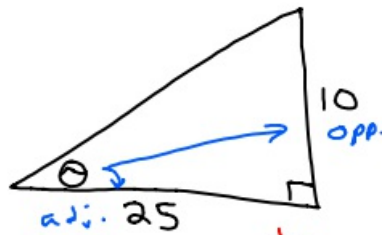


SOH  
CAH  
TOA

$$\cos^{-1} \cos \theta = \cos^{-1} \frac{11}{15}$$

$$\theta \approx 42.8^\circ$$

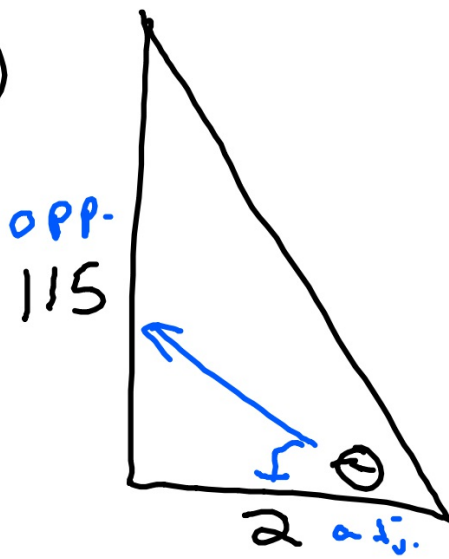
②



$$\tan^{-1} \tan \theta = \tan^{-1} \frac{10}{25}$$

$$\theta \approx 21.8^\circ$$

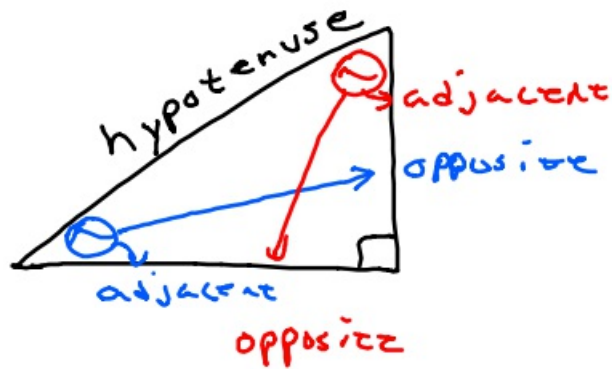
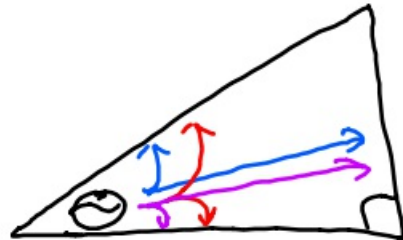
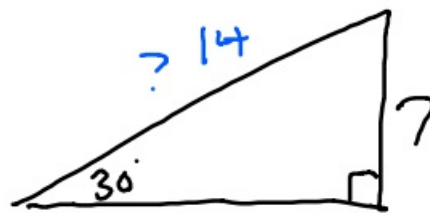
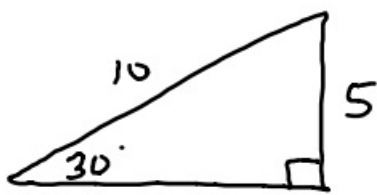
③



$$\tan^{-1} \theta = \frac{115}{2}$$

$$\theta \approx 89.0^\circ$$

2-12-20 3<sup>rd</sup> Trig



SOH

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

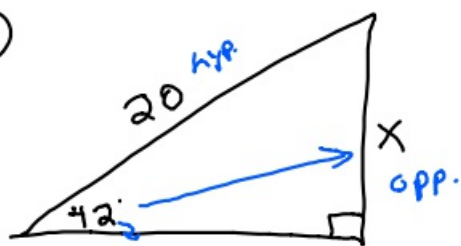
CAH

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

TOA

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

①



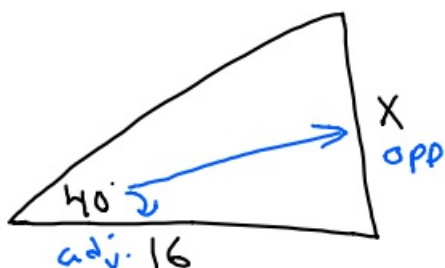
SOH  
CAH  
TOA

$$\frac{\sin 42^\circ}{1} = \frac{X}{20}$$

$$X = 20 \cdot \sin 42^\circ$$

$$X \approx 13.4$$

②



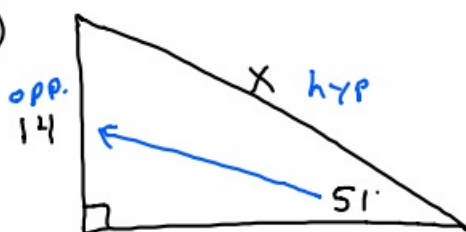
SOH  
CAH  
TOA

$$\frac{\tan 40^\circ}{1} = \frac{X}{16}$$

$$X = 16 \cdot \tan 40^\circ$$

$$X \approx 13.4$$

③



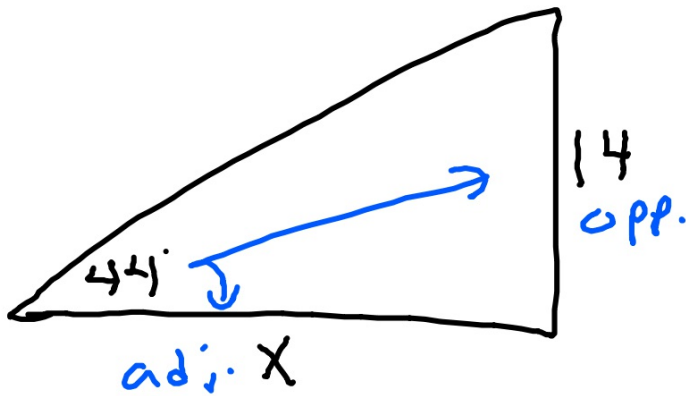
SOH  
CAH  
TOA

$$\frac{\sin 51^\circ}{1} = \frac{14}{X}$$

$$\frac{X \cdot \sin 51^\circ}{\cancel{\sin 51^\circ}} = \frac{14}{\cancel{\sin 51^\circ}}$$

$$X \approx 18.0$$

4



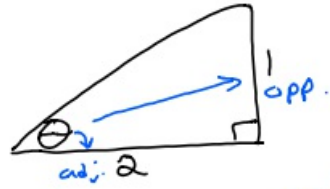
SOH  
CAH  
TOA

$$\frac{\tan 44^\circ}{1} = \frac{14}{X}$$

14.16

$$X \cdot \frac{\cancel{\tan 44}}{\cancel{\tan 44}} = \frac{14}{\tan 44}$$

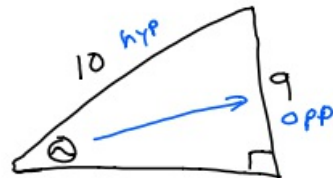
$$X \approx 14.5$$



$$\cancel{\tan^{-1} \tan} \theta = \frac{1}{2} = \tan^{-1} 0.5$$

$$\theta \approx 26.6^\circ$$

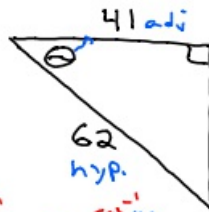
①



$$\cancel{\sin^{-1} \sin} \theta = \frac{9}{10} = \sin^{-1} 0.9$$

$$\theta \approx 64.2^\circ$$

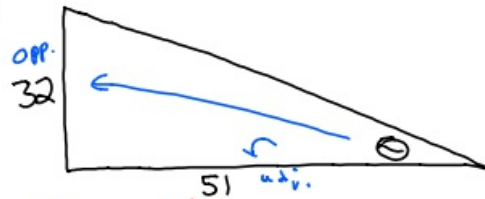
②



$$\cancel{\cos^{-1} \cos} \theta = \frac{41}{62} = \cos^{-1} \frac{41}{62}$$

$$\theta \approx 48.6^\circ$$

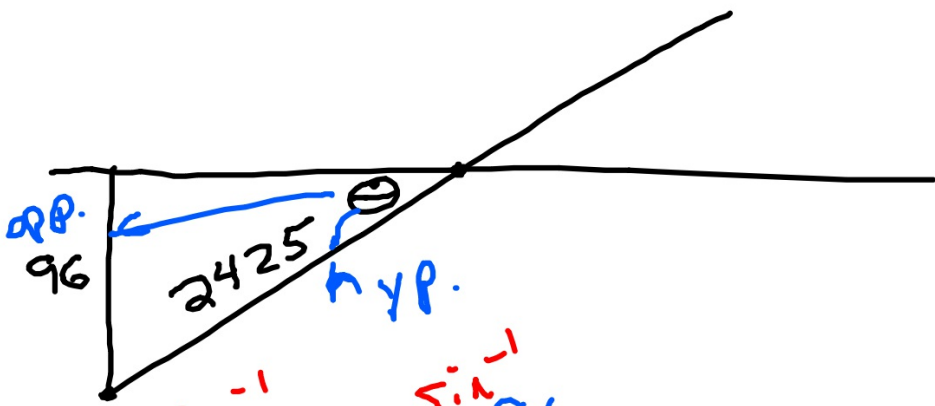
③



$$\cancel{\tan^{-1} \tan} \theta = \frac{32}{51} = \tan^{-1} \frac{32}{51}$$

$$\theta \approx 32.1^\circ$$





$$\sin^{-1} \frac{\sin \theta}{\sin 96} = \frac{96}{2425}$$

$$\theta \approx 2.3^\circ$$