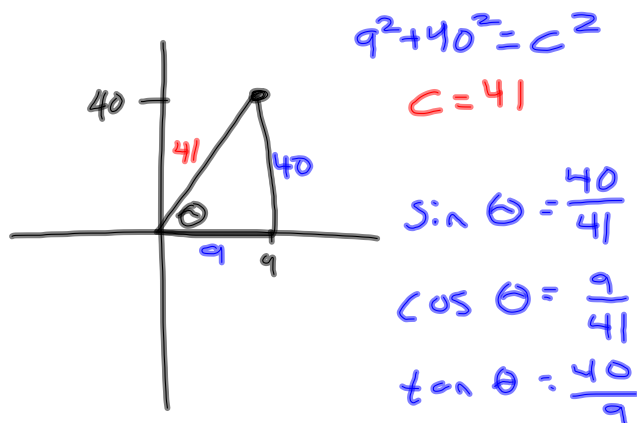
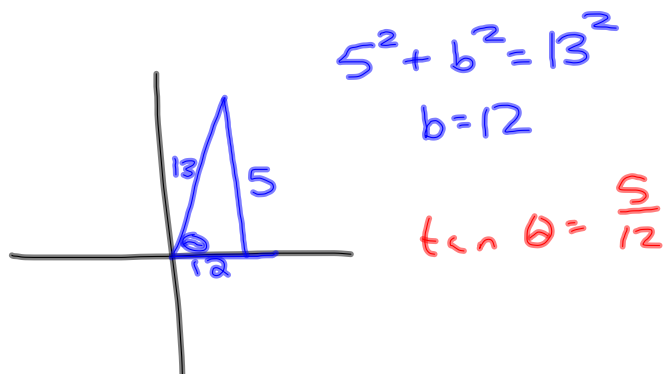


Find angle in standard position with measure θ if the point with the given coordinates lies on its terminal side.

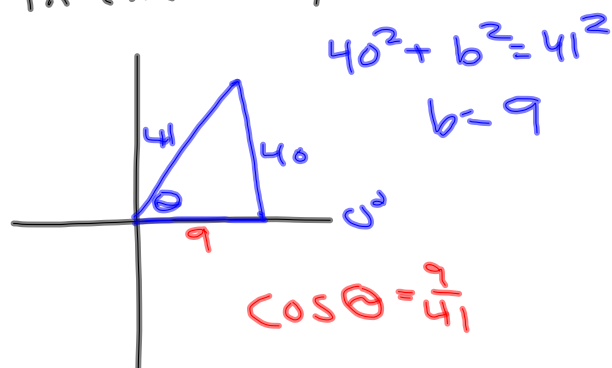
① $(9, 40)$ Find $\sin \theta$, $\cos \theta$, & $\tan \theta$.



② Find $\tan \theta$ if $\sin \theta = \frac{5}{13}$ and the terminal side of θ is in the 1st quadrant.



② Find $\cos \theta$ if $\sin \theta = \frac{40}{41}$ and the terminal side of θ is in the 1st quadrant.



Reciprocals of each other

$$\csc \theta \rightarrow \sin \theta$$

$$\sec \theta \rightarrow \cos \theta$$

$$\cot \theta \rightarrow \tan \theta$$

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

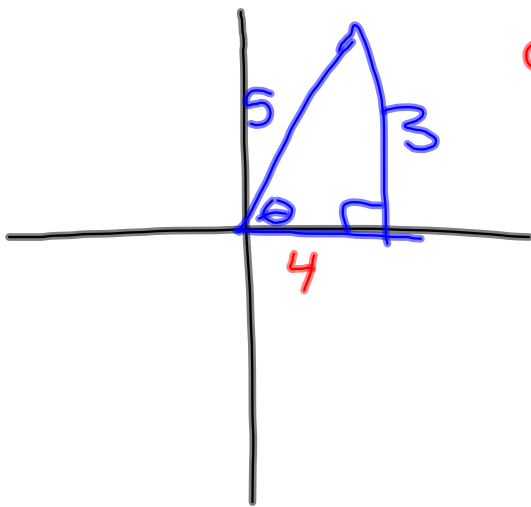
$$\sec \theta = \frac{\text{hyp.}}{\text{adj.}}$$

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

④ If $\tan \theta = \frac{3}{10}$, what is $\cot \theta$? $\frac{10}{3}$

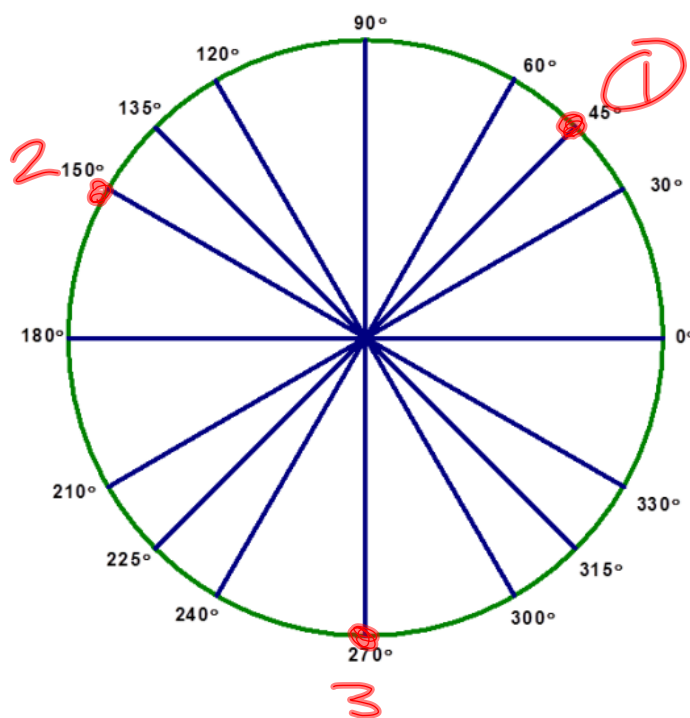
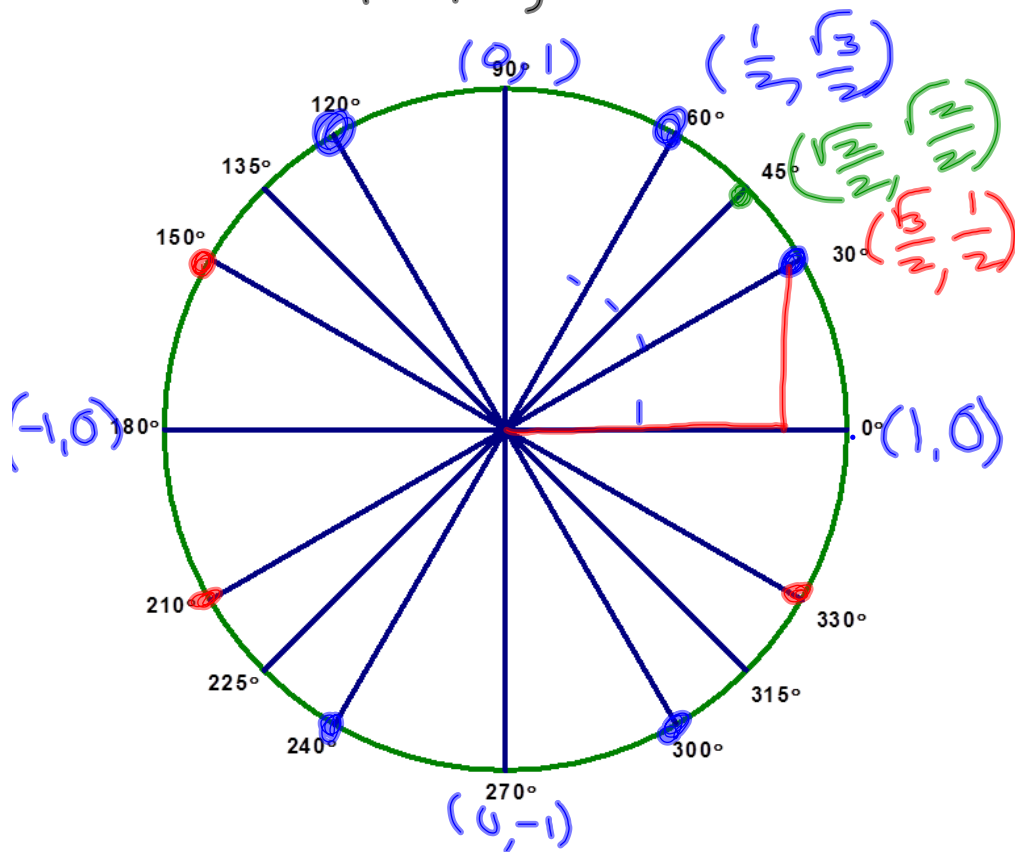
⑤ If $\sec \theta = \frac{4}{9}$, what is $\cos \theta$? $\frac{9}{4}$

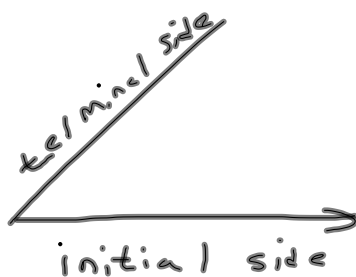
⑥ If $\sin \theta = \frac{3}{5}$, what is $\cot \theta$?



$$\cot \theta = \frac{\text{adj.}}{\text{opp.}} = \frac{4}{3}$$

4-8-14
4th Trig

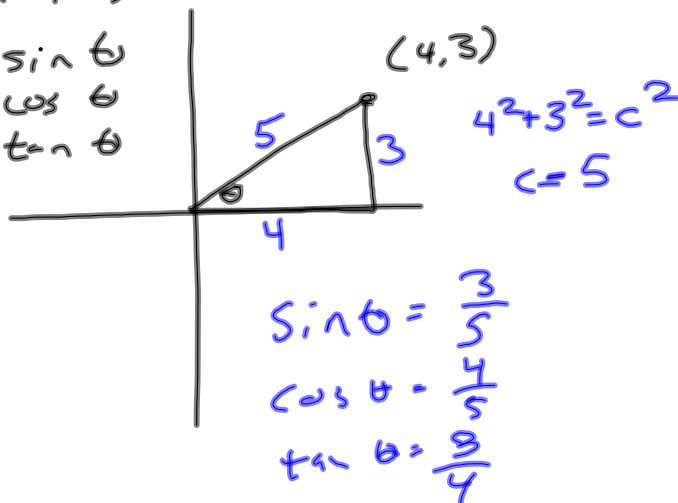




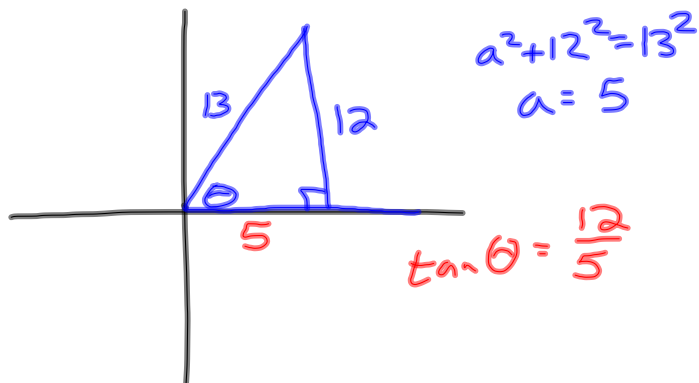
Find angle in standard position with measure θ if the point with the given coordinates lies on its terminal side.

① $(4, 3)$

Find $\sin \theta$
 $\cos \theta$
 $\tan \theta$



② Find $\tan \theta$ if $\sin \theta = \frac{12}{13}$ and the terminal side of θ is in the 1st quadrant.



Reciprocals of one another

$$\sec \theta \longleftrightarrow \cos \theta$$

$$\csc \theta \longleftrightarrow \sin \theta$$

$$\cot \theta \longleftrightarrow \tan \theta$$

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

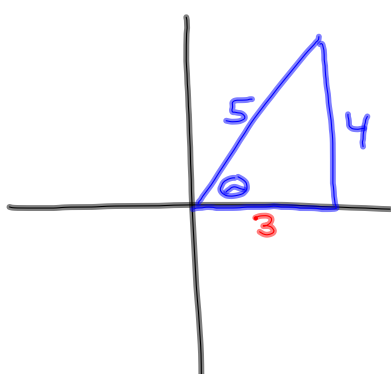
$$\csc \theta = \frac{\text{hyp.}}{\text{opp}}$$

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

If $\tan \theta = \frac{2}{11}$, what is $\cot \theta$? $\frac{11}{2}$

If $\sin \theta = \frac{2}{5}$, what is $\csc \theta$? $\frac{5}{2}$

If $\sin \theta = \frac{4}{5}$, what is $\cot \theta$?



$$\cot \theta = \frac{\text{adj.}}{\text{opp}} = \frac{3}{4}$$