

4-24-14  
Ch 9 Review

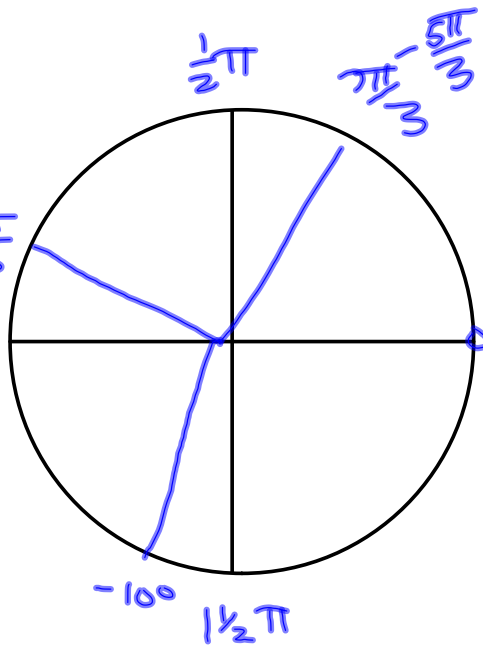
In which quadrant  
are

①  $-100^\circ$  III

②  $\frac{5\pi}{6}$  II  $\frac{5\pi}{6}$

③  $\frac{7\pi}{3} = 2\frac{1}{3}\pi$  I

④  $-\frac{5\pi}{3} = -1\frac{2}{3}\pi$  I



Coterminal

⑤  $-240^\circ$  and  $760^\circ$

Differ  $\frac{1000}{360} = \text{whole} \neq \text{No}$

⑥  $\frac{\pi}{5}$   $\frac{11\pi}{5}$  Differ  $\frac{11\pi}{5} - \frac{\pi}{5} = \frac{10\pi}{5}$

Yes  $= 2\pi$

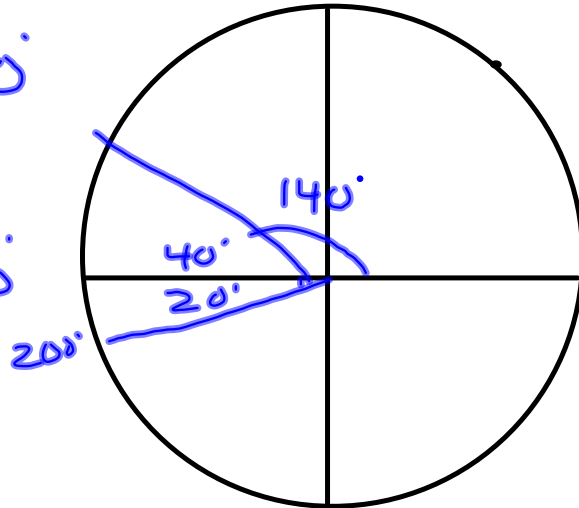
⑦  $-\frac{8\pi}{7}$   $\frac{6\pi}{7}$  differ by  $\frac{14\pi}{7} = 2\pi$

Yes

Give reference angle

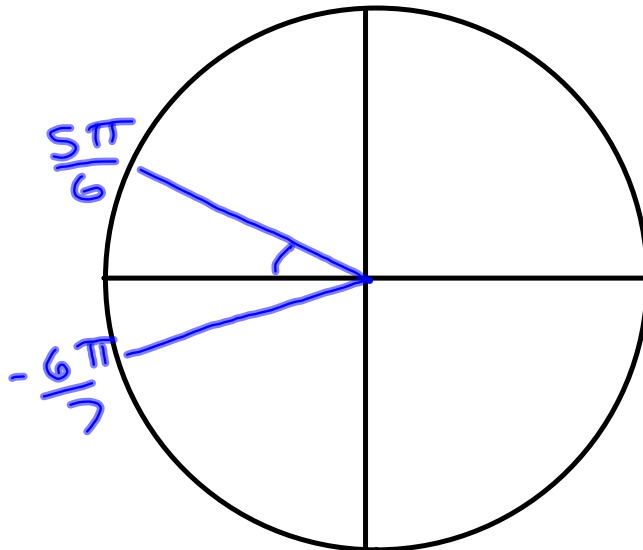
⑧  $140^\circ \rightarrow 40^\circ$

⑨  $200^\circ \rightarrow 20^\circ$



⑩  $\frac{5\pi}{6} \rightarrow \frac{\pi}{6}$

⑪  $\frac{6\pi}{7} \rightarrow \frac{\pi}{7}$

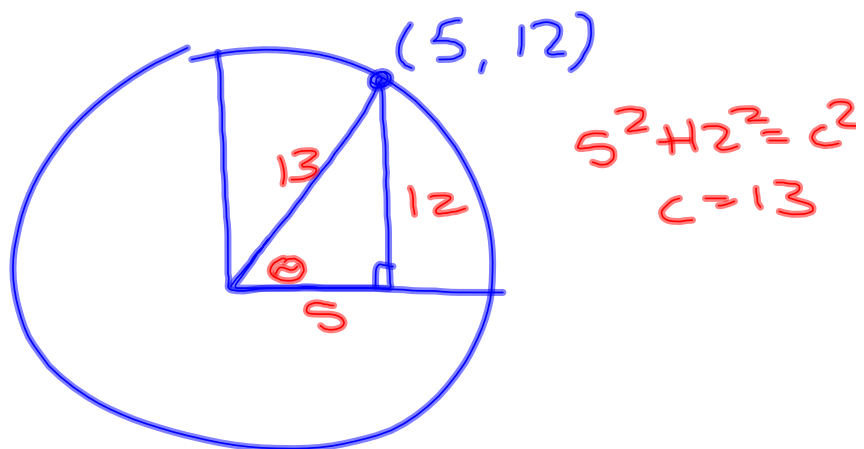


Coordinates (5, 12)

Find  $\cos \theta = \frac{5}{13}$

$\sin \theta = \frac{12}{13}$

$\tan \theta = \frac{12}{5}$



When  $\cos \theta = \frac{7}{25}$  and terminal side of  $\theta$  is in 1<sup>st</sup> quadrant, find

$7^2 + b^2 = 25^2$   
 $b = 24$

$\csc \theta = \frac{\text{hyp}}{\text{opp}} = \frac{25}{24}$

$\tan \theta = \frac{24}{7}$

$\cot \theta = \frac{7}{24}$

$\sec \theta = \frac{\text{hyp}}{\text{adj}} = \frac{25}{7}$

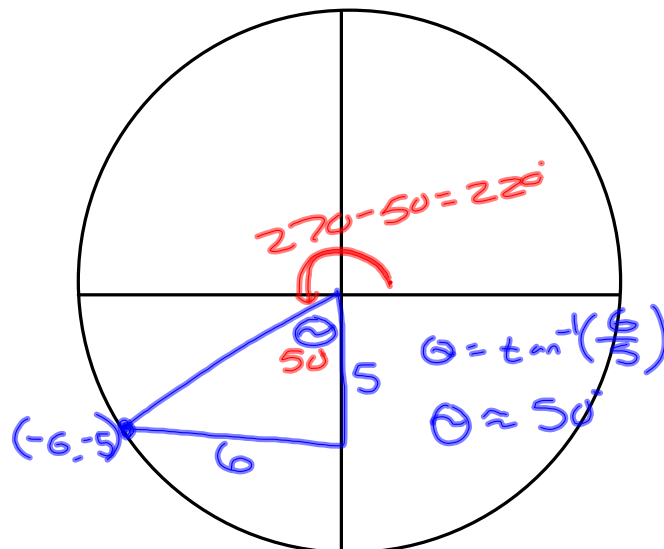
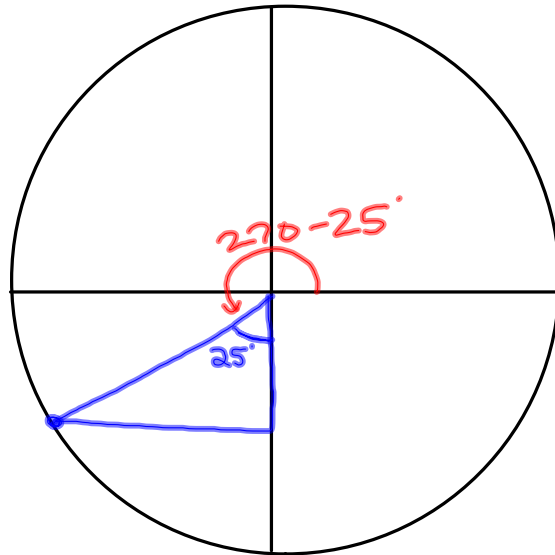


Change  $80^\circ$  to radians.

$$80^\circ \cdot \frac{\pi}{180^\circ} = \frac{8\pi}{18} = \frac{4\pi}{9}$$

Change  $\frac{3\pi}{5}$  to degrees.

$$\frac{3\pi}{5} \cdot \frac{180^\circ}{\pi} = \frac{540^\circ}{5} = 108^\circ$$

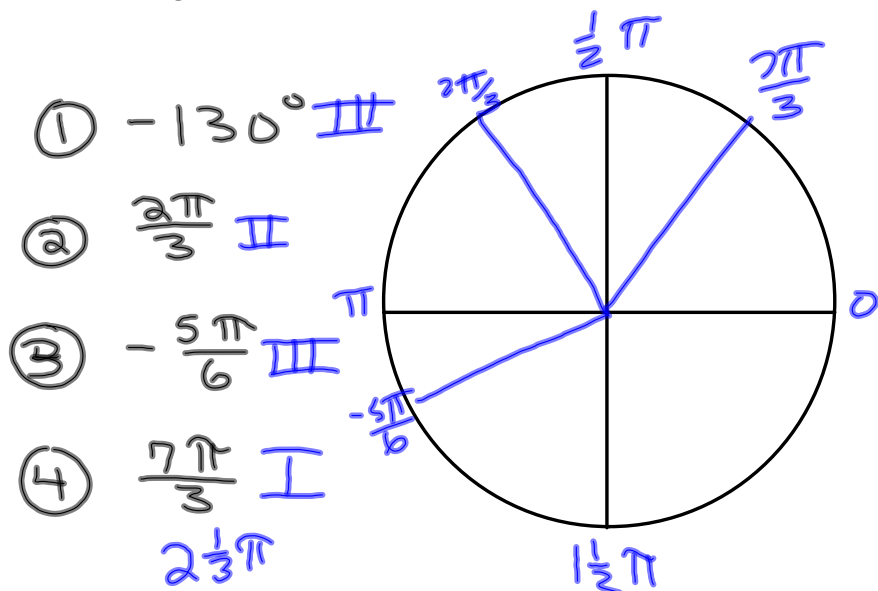


4-24-14

4<sup>th</sup> Trig

Test on Ch. 9 Monday

Tell which quadrant these are in



①  $-130^\circ$  III

②  $\frac{2\pi}{3}$  II

③  $-\frac{5\pi}{6}$  III

④  $\frac{7\pi}{3}$  I

$2\frac{1}{3}\pi$

$1\frac{1}{2}\pi$

Coterminal

⑤  $-310^\circ$   $730^\circ$   $730 - (-310) = \frac{1040}{360}$   
 $\approx 2.9...$

No

⑥  $\frac{7\pi}{2}$   $\frac{11\pi}{2}$

Difference =  $\frac{4\pi}{2} = 2\pi$   
Yes

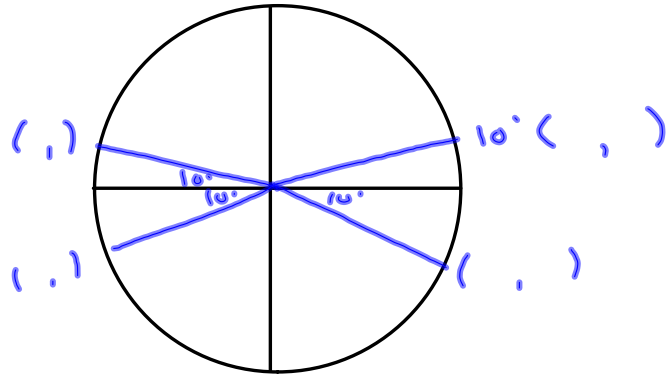
⑦  $-\frac{3\pi}{5}$   $\frac{11\pi}{5}$

$-\frac{3\pi}{5} - \frac{11\pi}{5} = -\frac{14\pi}{5}$

NO

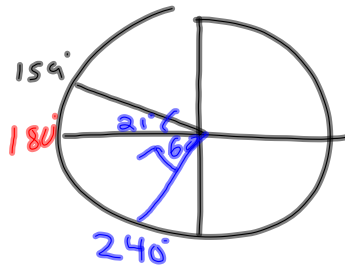
$= -2\frac{4}{5}\pi$

# Reference Angles

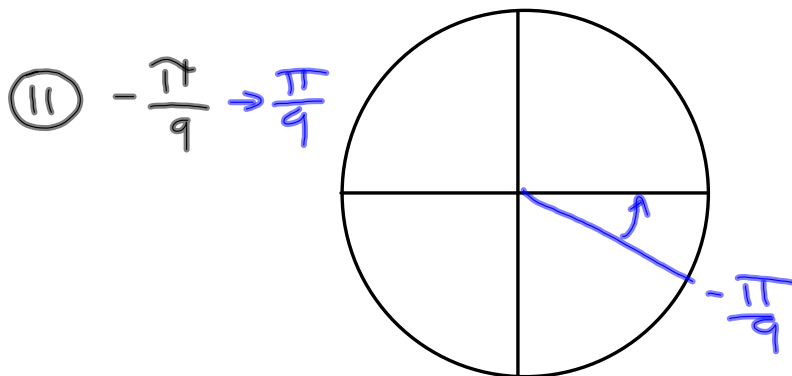
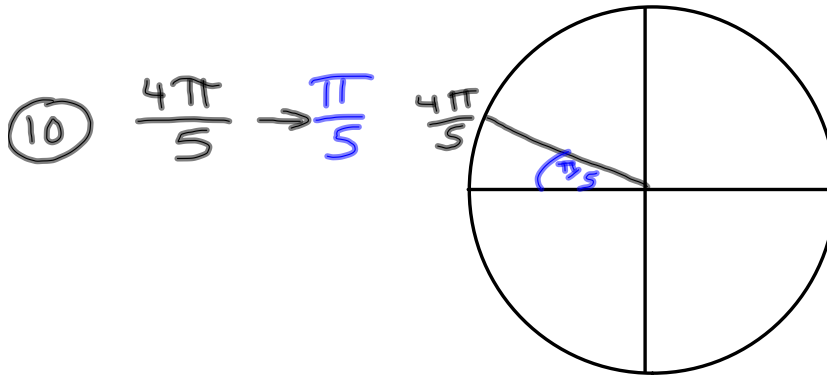


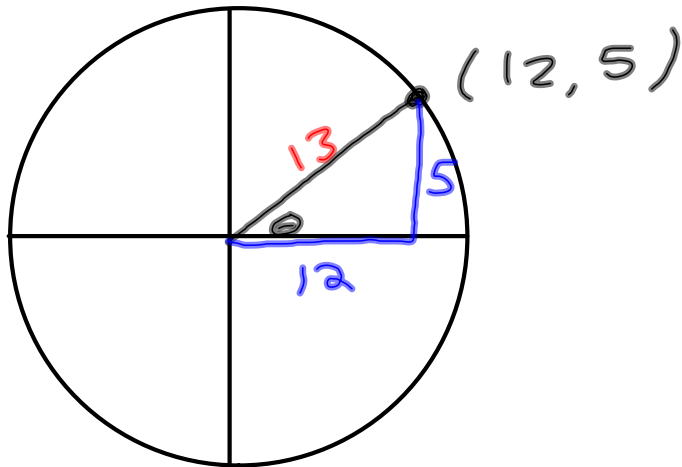
Give reference angle to

⑧  $159^\circ \rightarrow 21^\circ$



⑨  $240^\circ \rightarrow 60^\circ$





$$5^2 + 12^2 = c^2$$

$$c = 13$$

$$\sin \theta = \frac{5}{13}$$

$$\csc \theta = \frac{13}{5}$$

$$\tan \theta = \frac{5}{12}$$

$$\cot \theta = \frac{12}{5}$$

When  $\cos \theta = \frac{7}{25}$  and terminal side of  $\theta$  is in 1<sup>st</sup> quadrant find

$$a^2 + b^2 = 25^2$$

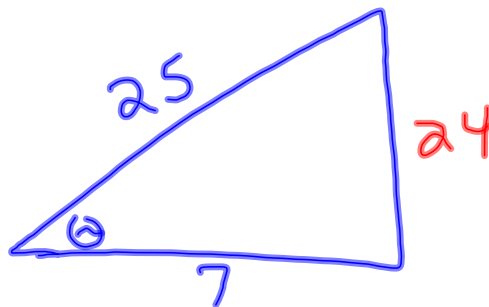
$$b = 24$$

$$\sin \theta = \frac{24}{25}$$

$$\tan \theta = \frac{24}{7}$$

$$\csc \theta = \frac{25}{24}$$

$$\sec \theta = \frac{25}{7}$$



In radians, what is  $80^\circ$ ?

$$80^\circ \cdot \frac{\pi}{180^\circ} = \frac{8\pi}{18} = \frac{4\pi}{9}$$

In degrees, what is  $\frac{8\pi}{5}$ ?

$$\frac{8\pi}{5} \cdot \frac{180^\circ}{\pi} = \frac{1440}{5} = 288^\circ$$

