

4-25-14
3rd Trig

Ch. 9 Test questions

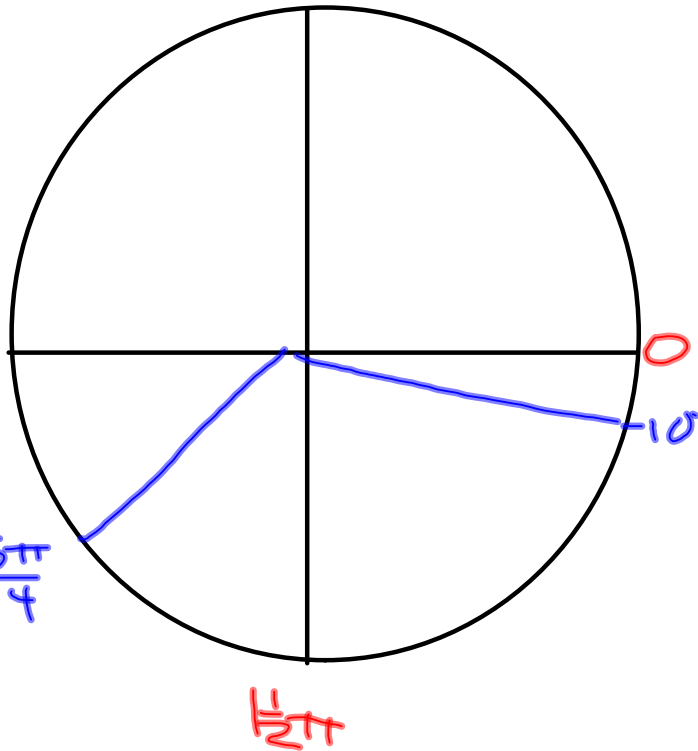
In which quadrant
are

① -10° IV

② $\frac{5\pi}{4} = \frac{1}{4}\pi$ III

③ $\frac{11\pi}{3} = 3\frac{2}{3}\pi$ IV

④ 250° III $\frac{5\pi}{4}$



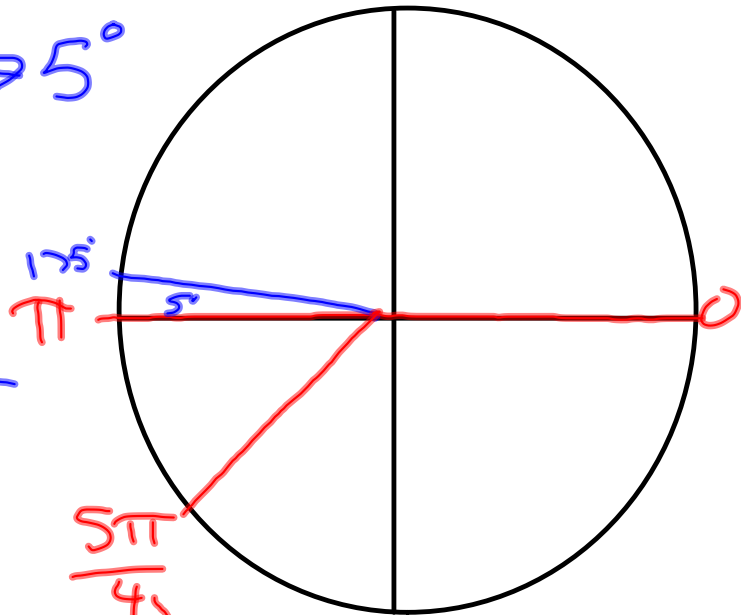
Coterminal

⑤ -260° and 310° $310^\circ - 20^\circ = 570^\circ$
NO

④ $-\frac{3\pi}{2}$ and $\frac{5\pi}{2}$ $\frac{5\pi}{2} - -\frac{3\pi}{2}$
 $\frac{8\pi}{2} = 4\pi$
Yes

Reference Angle

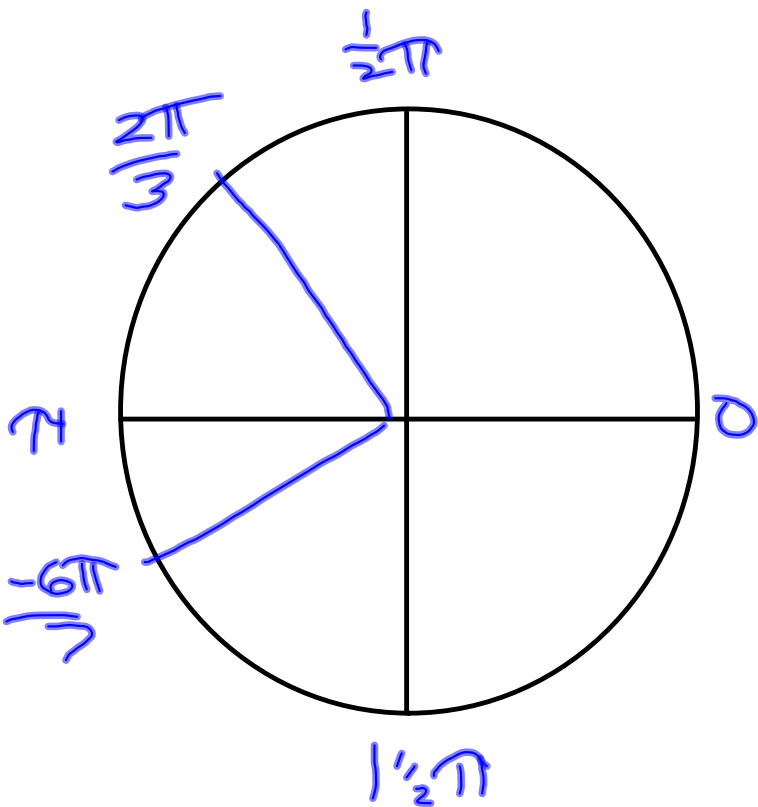
⑦ $175^\circ \rightarrow 5^\circ$



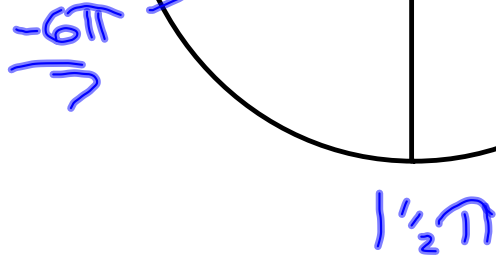
⑧ $\frac{5\pi}{4} \rightarrow \frac{\pi}{4}$



⑨ $\frac{2\pi}{3} \rightarrow \frac{\pi}{3}$



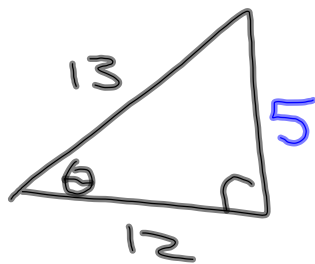
⑩ $\frac{6\pi}{7} \rightarrow \frac{\pi}{7}$



- ⑪ When $\cos \theta = \frac{12}{13}$ and the terminal side of θ is in the 1st quadrant, what is $\sec \theta$?

$$12^2 + b^2 = 13^2$$

$$b = 5$$

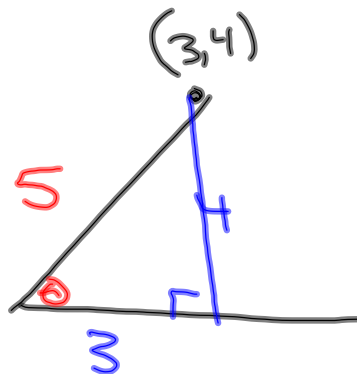


$$\sec \theta = \frac{13}{12}$$

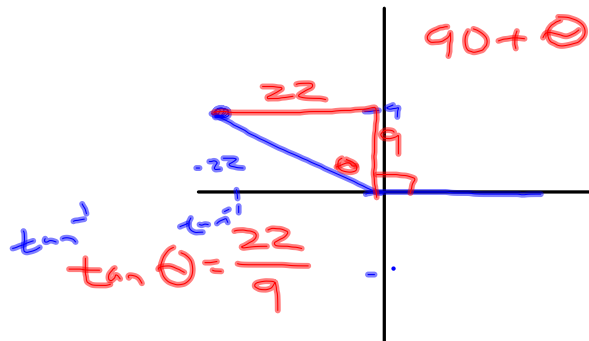
↓
reciprocal
of $\cos \theta = \frac{\text{adj}}{\text{hyp}}$

- ⑫ What is the $\cos \theta$ if the initial side of an angle is on the x-axis (0) and the terminal side goes through (3,4)?

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

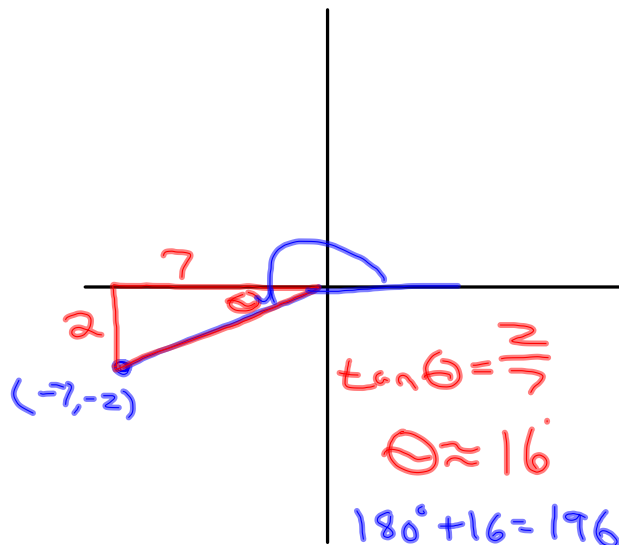


- 13) What is θ if the initial side of an angle is on the x-axis (0°) and the terminal side goes through $(-22, 9)$.



$$\theta \approx 67.8^\circ \quad 90 + 67.8^\circ = 157.8^\circ$$

- 14) What is θ if the initial side of an angle is on the x-axis (0°) and the terminal side goes through $(-7, -2)$.



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4th Trig

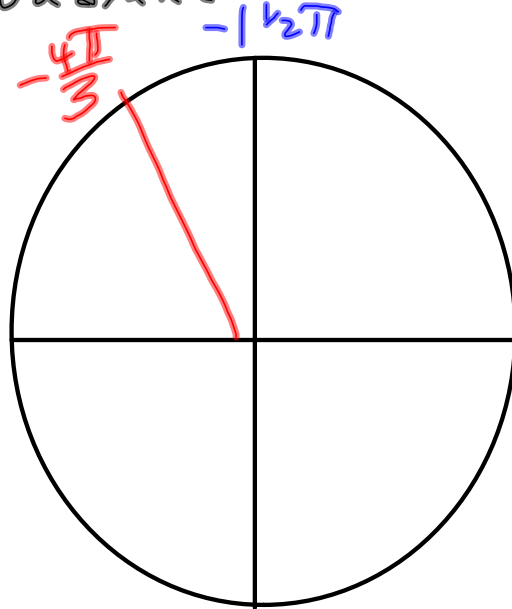
In which quadrant are these?

① 230° III

② -250° II

③ $-\frac{4\pi}{3} = -\frac{1}{3}\pi$ II

④ $\frac{13\pi}{5}$ II
 \downarrow
 2.6π



Coterminal

Are these coterminal?

⑤ -260° and 310° $310 - (-260) = 570^\circ$
NO

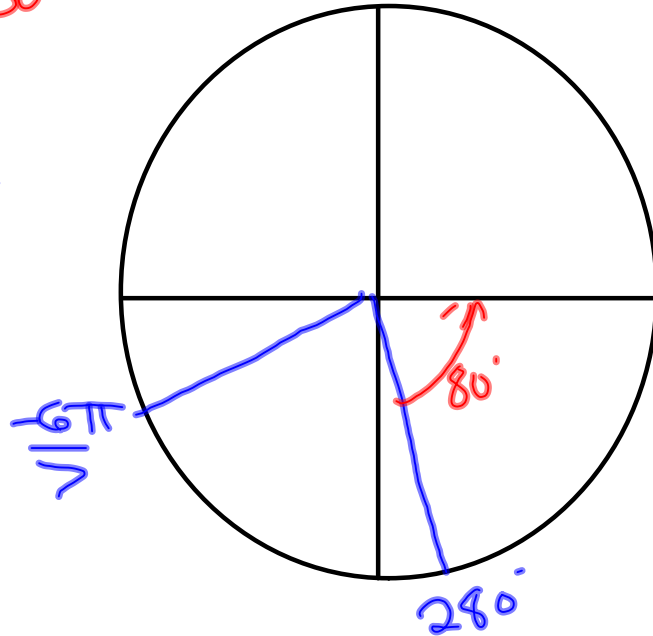
⑥ $-\frac{3\pi}{2}$ and $\frac{9\pi}{2}$

$$\frac{9\pi}{2} - \frac{-3\pi}{2} = \frac{12\pi}{2} = 6\pi \text{ Yes}$$

Reference Angle

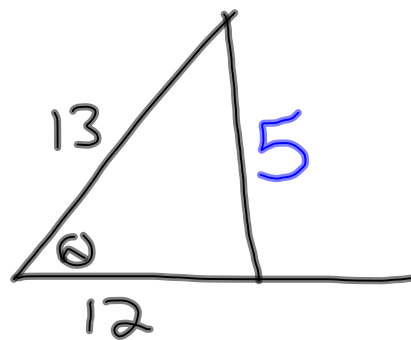
⑦ $280^\circ \rightarrow 80^\circ$

⑧ $-\frac{6\pi}{7} \rightarrow \frac{\pi}{7}$



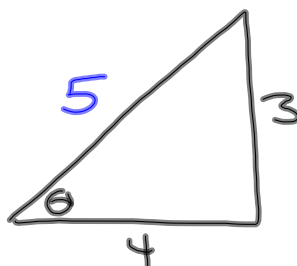
⑨ When $\cos \theta = \frac{12}{13}$ and the terminal side of θ is in the 1st quadrant, what is $\tan \theta$?

$$12^2 + b^2 = 13^2$$
$$b = 5$$



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

- ⑨ When $\tan \theta = \frac{3}{4}$ and the terminal side of θ is in the 1st quadrant, what is $\csc \theta$?



$$\csc \theta = \frac{\text{hyp}}{\text{opp}} = \frac{5}{3}$$

- ⑩ What angle is formed with the x-axis in the 1st quad if the angle opens counterclockwise and goes through $(-22, 12)$?

