

Alg. 2 - BE THURSDAY 1-6-11

FIND THE EXACT VALUES:

① $\cos -30^\circ$

② $\tan \frac{\pi}{6}$

③ $\sec 120^\circ$

④ $\sin 180^\circ$

⑤ $\tan -\frac{\pi}{2}$

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- Homework review — see next page
 - IGW \Rightarrow Q3 HW 1
 - Q3 Quiz 1 Tomorrow

Homework reviews: Pg. 713 # 27-31, 49, 56, 57

$$(27) \quad 120 \text{ deg} \cdot \frac{\pi \text{ rad}}{180 \text{ deg}} = \boxed{\frac{2\pi}{3}} \approx 2.09 \text{ radians}$$

$$(28) \quad 60 \text{ deg} \cdot \frac{\pi}{180 \text{ deg}} = \boxed{\frac{\pi}{3}} \approx 1.05 \text{ radians}$$

$$(29) \quad -15 \text{ deg} \cdot \frac{\pi}{180 \text{ deg}} = \boxed{\frac{-\pi}{12}} \approx 0.26 \text{ radians}$$

$$(30) \quad -\overset{45}{225} \text{ deg} \cdot \frac{\pi}{180 \text{ deg}} = \boxed{\frac{-5\pi}{4}} \approx -3.93 \text{ radians}$$

$$(31) \quad 660 \text{ deg} \cdot \frac{\pi}{180 \text{ deg}} = \boxed{\frac{11\pi}{3}} \approx 11.52 \text{ radians}$$

$$(49) \quad \frac{3\pi}{4} \Rightarrow$$

$\therefore \boxed{\frac{-5\pi}{4}} = \text{COTERMINAL}$

$$\text{or } 2\pi + \frac{3\pi}{4} = \frac{8\pi}{4} + \frac{3\pi}{4} = \boxed{\frac{11\pi}{4}} = \text{COTERMINAL}$$

$$(56) \quad A_{\Delta} = \frac{1}{2} r^2 \theta \quad \theta \text{ IN RADIANS}$$

$$r = 10 \text{ IN} \quad \theta = \frac{4\pi}{3}$$

$$\therefore A_{\Delta} = \frac{1}{2} \cdot \frac{10^2}{1} \cdot \frac{4\pi}{3}$$

$$A_{\Delta} = \frac{200\pi}{3} \text{ IN}^2$$

EXACT

or

$$A_{\Delta} \approx 209.4 \text{ IN}^2$$

APPROXIMATE

$$(57) \quad A_{\Delta} = \frac{1}{2} r^2 \theta$$

$$\theta = 150 \text{ deg} \cdot \frac{\pi}{180} = \frac{5\pi}{6}$$

$$r = 12 \text{ m}$$

$$\therefore A_{\Delta} = \frac{1}{2} \cdot \frac{12^2}{1} \cdot \frac{5\pi}{6} = 72 \cdot \frac{5\pi}{6}$$

$$A_{\Delta} = 60\pi \text{ m}^2$$

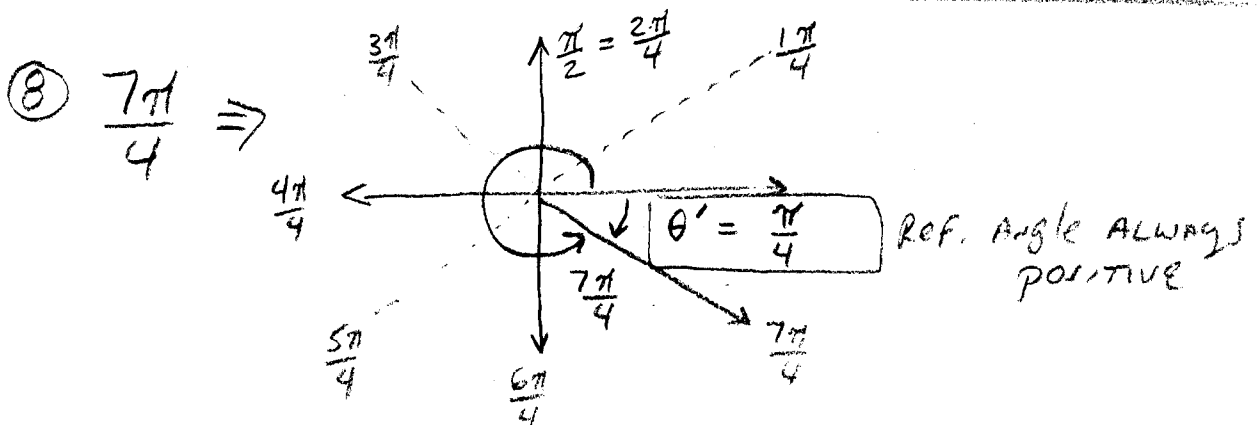
EXACT

or

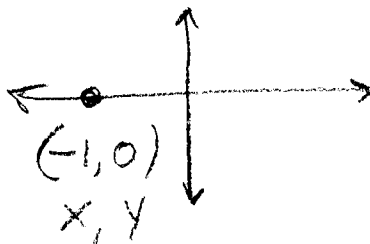
$$188.5 \text{ m}^2$$

APPROXIMATE

Homework Review Pg. 722 #8, 11-13, 20

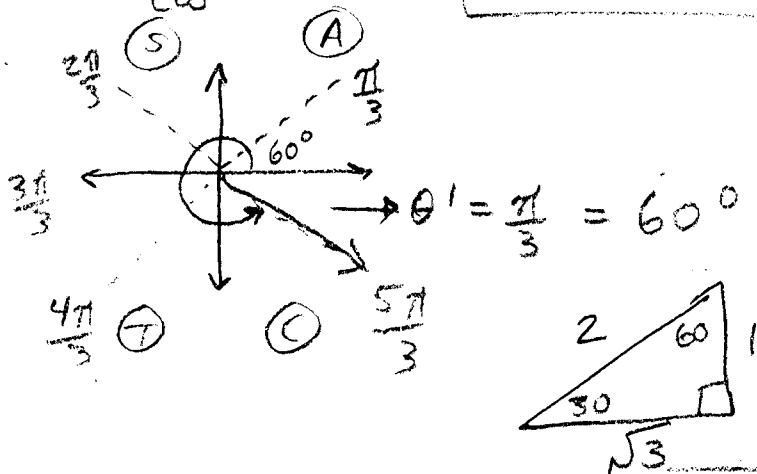


⑪ $\cos 180^\circ \Rightarrow$



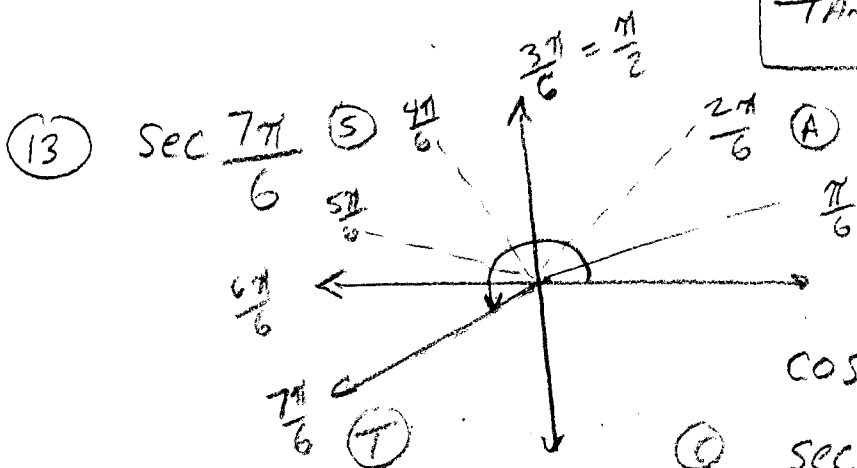
$\cos 180^\circ = -1$

⑫ $\tan \frac{5\pi}{3} \Rightarrow$



$\tan \frac{\pi}{3} = \sqrt{3}$

QUADRANT IV



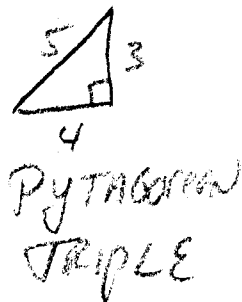
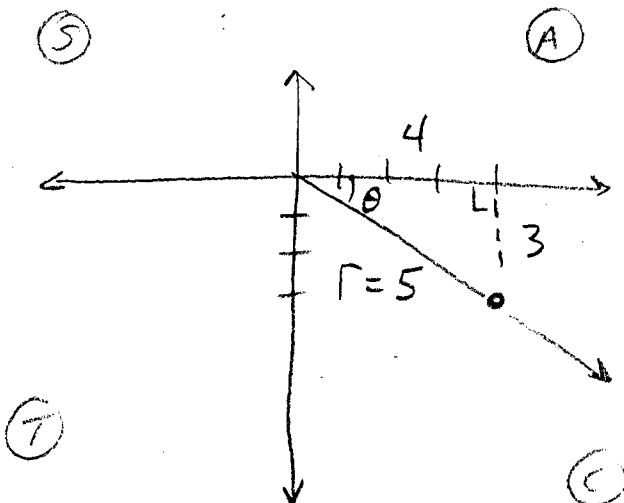
$\therefore \theta' = \frac{\pi}{6} = 30^\circ$

$\cos 30^\circ = \frac{\sqrt{3}}{2} \Rightarrow$

$\sec 30 \Rightarrow -\frac{2}{\frac{\sqrt{3}}{2}} = \boxed{-\frac{2\sqrt{3}}{3}}$

Pg. 722

(20) (4, -3)



$$\therefore \sin \theta = -\frac{3}{5} \quad \csc \theta = -\frac{5}{3}$$

$$\cos \theta = \frac{4}{5} \quad \sec \theta = \frac{5}{4}$$

$$\tan \theta = -\frac{3}{4} \quad \cot \theta = -\frac{4}{3}$$