

## Homework 7-4

#1 - 8 see next slide for sketches

#1 - 8 reference angles:

1.  $30^\circ$     2.  $\pi/6$     3.  $\pi/3$     4. None

5.  $45^\circ$     6.  $\pi/4$     7.  $\pi/6$     8.  $\pi/3$

9. III

10. D

Name: Key

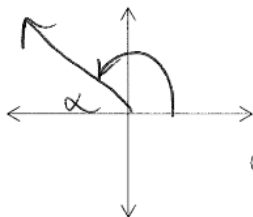
Algebra 2 Homework 7-4

Period: \_\_\_\_\_

**For #1 - 8:** a. Sketch the angle in standard position.

b. State the reference angle for each (if possible).

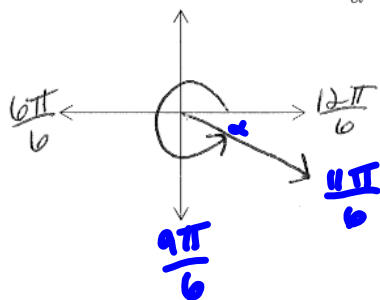
1.  $150^\circ$



$\alpha = 30^\circ$

$\alpha = 180^\circ - 150^\circ = 30^\circ$

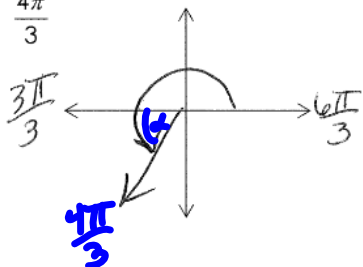
2.  $\frac{11\pi}{6}$



$\alpha = \frac{\pi}{6}$

$\alpha = \frac{12\pi}{6} - \frac{11\pi}{6} = \frac{\pi}{6}$

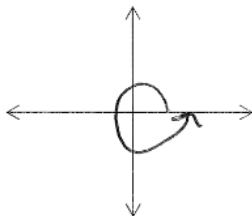
3.  $\frac{4\pi}{3}$



$\alpha = \frac{\pi}{3}$

$\alpha = \frac{4\pi}{3} - \frac{3\pi}{3} = \frac{\pi}{3}$

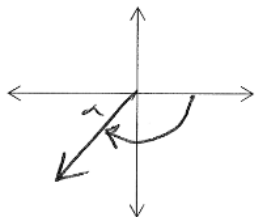
4.  $2\pi$



$\alpha = \text{N/A}$

Quadrantal!

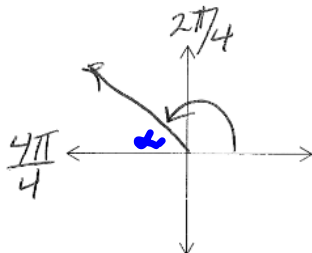
5.  $-135^\circ$



$\alpha = 45^\circ$

$\alpha = 180 - 135 = 45^\circ$

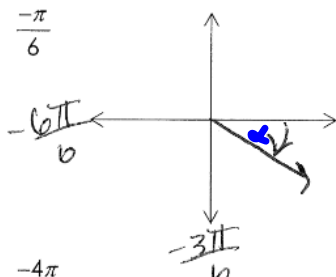
6.  $\frac{3\pi}{4}$



$\alpha = \frac{\pi}{4}$

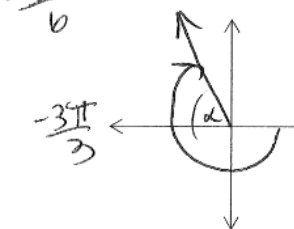
$\alpha = \frac{4\pi}{4} - \frac{3\pi}{4} = \frac{\pi}{4}$

7.  $-\frac{\pi}{6}$



$\alpha = \frac{\pi}{6}$

8.  $-\frac{4\pi}{3}$

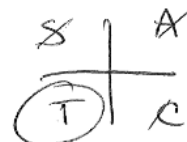


$\alpha = \frac{\pi}{3}$

$\alpha = \frac{4\pi}{3} - \frac{3\pi}{3} = \frac{\pi}{3}$

9. What quadrant is angle
- $\theta$
- in if
- $\sin(\theta) = -.5$
- and
- $\cos(\theta) < 0$
- ?

III

 $\sin(-)$  $\cos(-)$ 

10. On the unit circle, the terminal side of an angle
- $\theta$
- passes through the point
- $(a, -b)$
- .

Both  $a$  and  $b$  are positive. Which is not true?

a.  $\sin(\theta) = -b$

b.  $\tan(\theta) < 0$

c.  $\cos(\theta) = a$

d.  $\frac{\sin(\theta)}{\cos(\theta)} > 0$

$\tan = \frac{y}{x} = \frac{-b}{a}$