College Algebra Name: Key

Chapter 5 Quiz Review Date: _____ Period: _____

Convert each degree measure to radians and each radian measure to degrees.

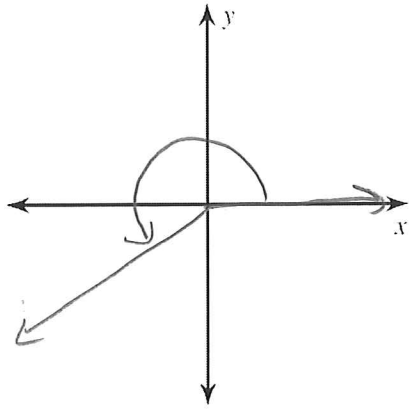
1.) $125^\circ \cdot \frac{\pi}{180}$ $\frac{25\pi}{36}$

2.) $1.75 \cdot \frac{180}{\pi}$ 100.27°

3.) $\frac{5\pi}{9} \cdot \frac{180}{\pi}$ 100°

Sketch the angle in standard position. Don't forget to draw an arrow for the direction. Then state one positive and one negative angle that are co-terminal to the angle given.

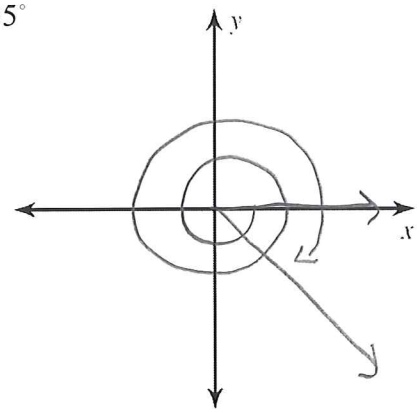
4.) 247°



Positive: 607°

Negative: -113°

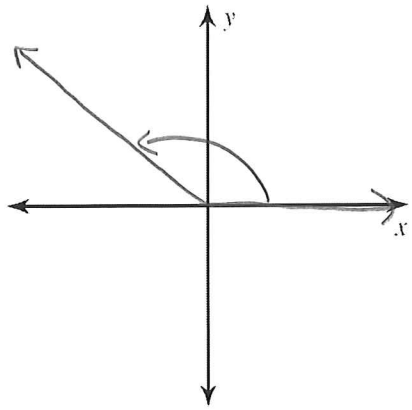
5.) -735°



Positive: 345°

Negative: $-1095^\circ / -375^\circ / -15^\circ$

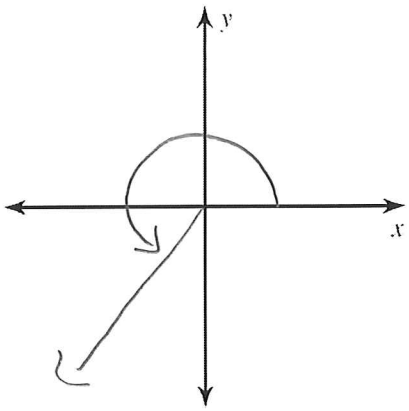
6.) $\frac{3\pi}{4}$



Positive: $\frac{11\pi}{4}$

Negative: $\frac{-5\pi}{4}$

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



Positive: $\frac{10\pi}{3}$

Negative: $\frac{-2\pi}{3}$

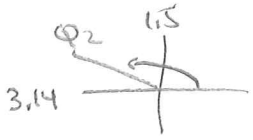
Find the reference angle for the following angles.

8.) $\frac{5\pi}{4}$ 

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

9.) $-235^\circ \rightarrow 125^\circ$ 

$180 - 125 = 55^\circ$

10.) 2.4 

$\pi - 2.4$

$\boxed{.74}$

11.) $\frac{5\pi}{6}$ 

$.83\pi$ $\pi - \frac{5\pi}{6} = \boxed{\frac{\pi}{6}}$

12.) 645° 285° 

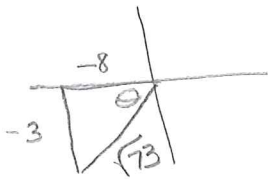
$360 - 285$

$\boxed{75^\circ}$

13.) -695° 25° 

$\boxed{25^\circ}$

Find the six trig functions given the following information.

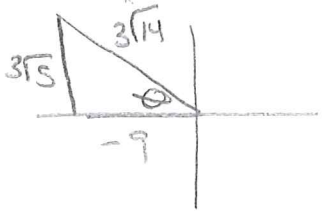
14.) (-8, -3) 

$(-8)^2 + (-3)^2 = r^2$

$73 = r^2$

$\sqrt{73} = r$

$\sin\theta = \frac{-3}{\sqrt{73}}$	$\csc\theta = -\frac{\sqrt{73}}{3}$
$\cos\theta = \frac{-8}{\sqrt{73}}$	$\sec\theta = -\frac{\sqrt{73}}{8}$
$\tan\theta = \frac{3}{8}$	$\cot\theta = \frac{8}{3}$

15.) $(-9,\ 3\sqrt{5})$ 

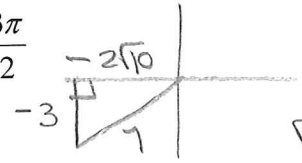
$(-9)^2 + (3\sqrt{5})^2 = r^2$

$126 = r^2$

$3\sqrt{14} = r$

$\frac{3\sqrt{5}}{3\sqrt{14}}$ $\frac{-9}{3\sqrt{14}}$ $\frac{3\sqrt{5}}{-9}$

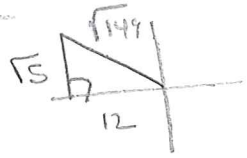
$\sin\theta = \frac{\sqrt{5}}{\sqrt{14}}$	$\csc\theta = \frac{\sqrt{14}}{\sqrt{5}}$
$\cos\theta = \frac{-3}{\sqrt{14}}$	$\sec\theta = -\frac{\sqrt{14}}{3}$
$\tan\theta = -\frac{\sqrt{5}}{3}$	$\cot\theta = -\frac{3}{\sqrt{5}}$

16) $\sec A = \frac{-7}{2\sqrt{10}}$ $\pi < \theta < \frac{3\pi}{2}$ 

$7^2 = (-2\sqrt{10})^2 + y^2$

$9 = y^2$ $y = 3$

$\sin A = \frac{-3}{7}$	$\csc A = \frac{-7}{3}$
$\cos A = \frac{-2\sqrt{10}}{7}$	$\sec A = \frac{-7}{2\sqrt{10}}$
$\tan A = \frac{3}{2\sqrt{10}}$	$\cot A = \frac{2\sqrt{10}}{3}$

17.) $\tan B = -\frac{\sqrt{5}}{12}$ $90^\circ < \theta < 180^\circ$ 

$(\sqrt{5})^2 + 12^2 = r^2$

$149 = r^2$

$\sqrt{149} = r$

$\sin B = \frac{\sqrt{5}}{\sqrt{149}}$	$\csc B = \frac{\sqrt{149}}{\sqrt{5}}$
$\cos B = \frac{-12}{\sqrt{149}}$	$\sec B = -\frac{\sqrt{149}}{12}$
$\tan B = -\frac{\sqrt{5}}{12}$	$\cot B = \frac{-12}{\sqrt{5}}$