Pre-Calculus/Trig3
In Class Review Chapter 4.1-4.4

Names __Key__
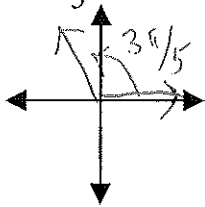
Block _____/_____ Date _____

Sketch the following in standard position.

Determine the quadrant the angle is in.
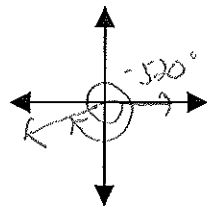
Then determine the reference angle.

1. $\dfrac{3\pi}{5}$

Quadrant __II__

Ref. Angle __$2\pi/5$__

2. $-520°$ $-160°$

Quadrant __III__

Ref. Angle __$20°$__

Convert the following to the other angle measure.

3. $42°$ $\dfrac{\pi}{180} = \dfrac{42\pi}{180}$

$\boxed{\dfrac{7\pi}{30}}$

4. $-\dfrac{\pi}{9} \cdot \dfrac{180}{\pi}$

$\boxed{-20°}$

5. $-180° = \boxed{-\pi}$

Find a positive and negative coterminal angle for each of the following.

6. $420°$

$60°, 780°$

$-300°$

7. $-\dfrac{\pi}{4}$

$7\pi/4$

$-9\pi/4$

8. *Find the arc length and the area of the sector.* $\theta = 60°$, $r = 3in$. $S = \theta \cdot r$

$A = \dfrac{1}{2} r^2 \theta$

$S = \dfrac{\pi}{3} \cdot 3$

$\boxed{S = \pi}$

$\dfrac{1}{2} \cdot 9 \cdot \dfrac{\pi}{3} = \boxed{\dfrac{3\pi}{2} in^2}$

Write the (x , y) coordinates of the following angles. Then find the exact value.

9. $\sin -45°$

$\left(\dfrac{\sqrt{2}}{2}, -\dfrac{\sqrt{2}}{2} \right)$

$-\sqrt{2}/2$

10. $\cos \dfrac{3\pi}{4}$

$\left(-\dfrac{\sqrt{2}}{2}, \dfrac{\sqrt{2}}{2} \right)$

$-\sqrt{2}/2$

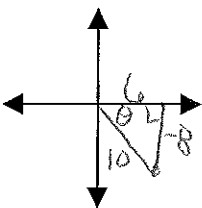11. $\cot \dfrac{13\pi}{2}$ $6.5\pi = \dfrac{\pi}{2}$

$(0, 1)$

$\tan = \dfrac{\sin}{\cos} = \dfrac{1}{0}$

$\boxed{\cot 0}$

12. $\sec \theta = -\dfrac{1}{2}$

$\cos: \dfrac{2}{1} = \dfrac{adj}{hyp}$ $\varnothing$

13. *Given the point (6, -8)*

values of the six trig function.

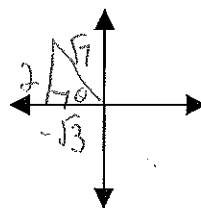$\sin\theta = -\dfrac{4}{5}$ $\csc\theta = \dfrac{5}{4}$ (shown as $-\frac{5}{4}$)

$\cos\theta = \dfrac{3}{5}$ $\sec\theta = \dfrac{5}{3}$

$\tan\theta = -\dfrac{4}{3}$ $\cot\theta = -\dfrac{3}{4}$

14. *Given that* $\cot \theta = -\dfrac{\sqrt{3}}{2}$ *in Quad II, find the*

state the six trig ratios. $\tan = \dfrac{-2}{\sqrt{3}} \cdot \dfrac{\sqrt{3}}{\sqrt{3}} = \dfrac{-2\sqrt{3}}{3}$

$4+3 = r^2$

$r = \sqrt{7}$

$\sin\theta = \dfrac{2\sqrt{7}}{7}$ $\csc\theta = \dfrac{\sqrt{7}}{2}$

$\cos\theta = \dfrac{-\sqrt{21}}{7}$ $\sec\theta = \dfrac{-\sqrt{21}}{3}$

$\tan\theta = \dfrac{2\sqrt{3}}{3}$ $\cot\theta = \dfrac{-\sqrt{3}}{2}$

Use a calculator to find each value: (round to 2 decimal places if necessary)

15. $\cos 45°$ $\boxed{.71}$

$\boxed{0.7071}$

16. $\cot \dfrac{\pi}{3}$ $\boxed{= .58}$

$60°$

$\dfrac{1}{\tan 60°}$

17. $\sin -270° = 1$

18. $\sec -\dfrac{\pi}{2} = U$

$\dfrac{1}{\cos -90°}$