College Algebra Name: Nomani

Unit 5 – LT 4 Day 2 Period: _____ Date: _____

LT 4: I can use the unit circle to find the exact value of a trig ratio

Find the EXACT trig value. Simplify and rationalize any radicals. NO DECIMALS!!!

1. $\sin\frac{3\pi}{4}$ $\frac{\sqrt{2}}{2}$

2. $\cos 360^\circ$ 1

3. $\tan\frac{\pi}{6}$ $\frac{\sqrt{3}}{3}$

4. $\cot 120^\circ$ $-\frac{\sqrt{3}}{3}$

5. $\csc\frac{5\pi}{6}$ 2

6. $\sec 240^\circ$ -2

7. $\sin 0$ 0

8. $\cos 225^\circ$ $-\frac{\sqrt{2}}{2}$

9. $\tan\frac{5\pi}{3}$ $-\sqrt{3}$

10. $\cos 240^\circ$ $-\frac{1}{2}$

11. $\csc\frac{7\pi}{6}$ -2

12. $\sec 135^\circ$ $-\sqrt{2}$

13. $\sin\frac{\pi}{6}$ $\frac{1}{2}$

14. $\tan 0$ 0

15. $\cos\frac{\pi}{4}$ $\frac{\sqrt{2}}{2}$

16. $\tan 315^\circ$ -1

17. $\cot \pi$ undefined

18. $\csc 150^\circ$ 2

Use the trigonometric function values to evaluate each expression.

19.) $\sin^2\frac{\pi}{3}+4\cos^2\frac{\pi}{2}$

$\left(\frac{\sqrt{3}}{2}\right)^2+4(0)^2$

$\boxed{\frac{3}{4}}$

20.) $2\csc 90^\circ+6\cos 120^\circ$

$2(1)+6\left(-\frac{1}{2}\right)$

$2-3$

$\boxed{-1}$

21.) $2\sin\pi-4\tan\frac{\pi}{4}$

$2(0)-4\left(\frac{\sqrt{2}}{2}\right)$

$\boxed{-2\sqrt{2}}$

22.) $\cot^2 300^\circ-4\sec^2 240^\circ$

$\left(-\frac{\sqrt{3}}{3}\right)^2-4\left(-\frac{1}{2}\right)^2$

$\frac{3}{9}-1$

$\boxed{-2/3}$

Identify the quadrant or quadrants for the angle θ satisfying the given conditions.

23.) $\sin\theta>0,\quad \cot\theta<0$

$+\quad -$

$\boxed{\text{quad II}}$

24.) $\sec\theta<0,\quad \tan\theta<0$

$\cos\theta\quad -$

$-$

$\boxed{\text{II}}$

25.) $\csc\theta<0$

$\sin\theta$

$-$

$\boxed{\text{III \& IV}}$

26.) $\cos\theta<0,\quad \sin\theta<0$

$-\quad -$

$\boxed{\text{quad III}}$