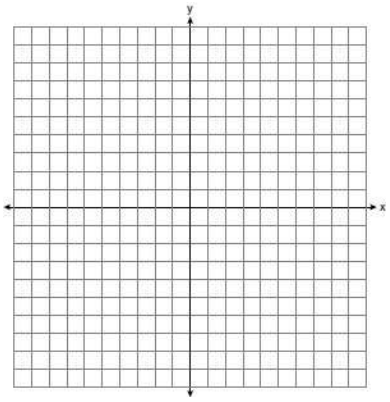
Name _____ Date _____

Mr. Schlansky Pre Calculus

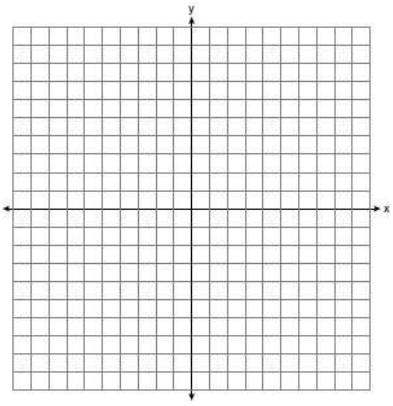
Unit 6: Trigonometry Review Sheet

Sketch the following angles on the grid

1. $\theta = \frac{10\pi}{3}$



2. $\theta = -\frac{\pi}{6}$



3. If $\sin\theta = \frac{5}{8}$ and θ is in Quadrant II, find:

a) $\cos\theta$ b) $\sin\theta$ c) $\tan\theta$

d) $\sec\theta$ e) $\csc\theta$ f) $\cot\theta$

4. Angle θ is in standard position and $(4,-7)$ is a point on the terminal side of θ. Find:

a) $\cos\theta$ b) $\sin\theta$ c) $\tan\theta$

d) $\sec\theta$ e) $\csc\theta$ f) $\cot\theta$

5. If $\cos\theta = \frac{\sqrt{7}}{4}$, and $0 < x < \frac{\pi}{2}$, find the value of $\cos 2\theta$.

6. If $\sin x = \frac{4}{5}$, and $\frac{\pi}{2} < x < \pi$, find the value of $\sin 2x$.

7. If $\sin\theta = \frac{3}{5}$, and $\cos\theta < 0$, find $\sin\frac{1}{2}\theta$.

8. If $\tan\theta = -\frac{4}{7}$, and $\sin\theta > 0$, find $\cos\frac{1}{2}\theta$.

9. If $\sin A = \frac{3}{5}$ and $\cos B = -\frac{5}{13}$, find $\cos(A - B)$

10. If $\tan x = -\frac{5}{4}$ and $\cos y = \frac{5}{\sqrt{29}}$, and x terminates in quadrant II and y terminates in quadrant IV, find the value of $\tan(x - y)$.

Find the exact value of the following

11. $\tan\left(\frac{3\pi}{4}\right)$

12. $\cos\left(\frac{7\pi}{6}\right)$

Find the point on the unit circle that terminates with the following angles:

13. $\theta = 300^{\circ}$

14. $\theta = 120^{\circ}$

Find the exact value of the following

15. $\sin 75^{\circ}$

16. $\tan 15^{\circ}$

Express the following as a single trigonometric functions

17. $\sec \vartheta \csc \vartheta \cos \vartheta$

18. $\csc \vartheta \tan \vartheta \cos \vartheta$

19. $\sec^2 \theta (1 - \cos^2 \theta)$

20. $\tan^2 \theta + \sin^2 \theta + \cos^2 \theta$

Solve the following equations for all values of θ such that $0 \le \theta < 360$

21. $2\sin\theta + 1 = 0$

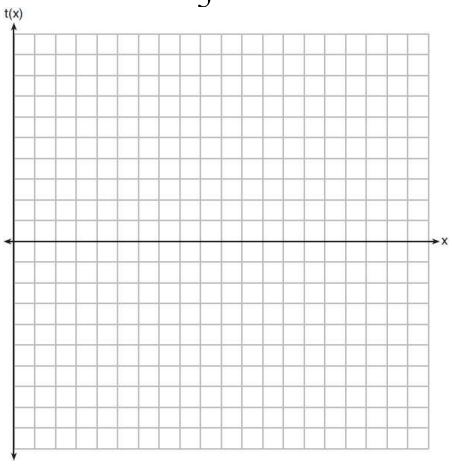
22. $3\cos\theta + 1 = 1$

23. $3\cos 2\theta + 2\sin\theta = -1$

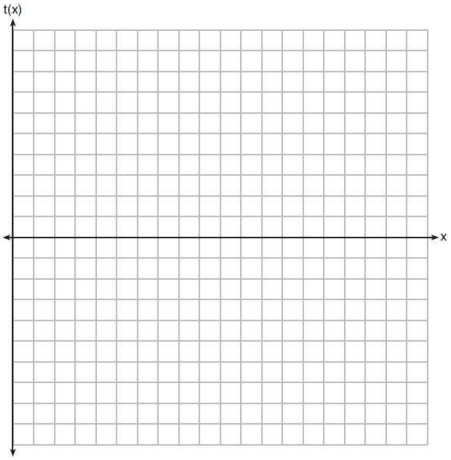
24. $\cos 2\theta + \cos\theta = -1$

Graph one full cycle of each of the following trig equations

25. $y = -6\sin\frac{1}{5}x + 2$

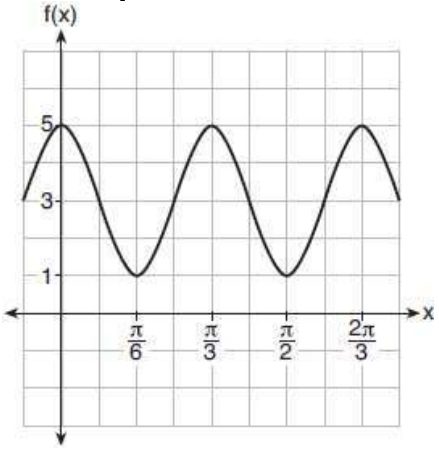


26. $y = -5\sin\frac{\pi}{6}x + 2$



Write the equation of each of the following trig graphs.

27.



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