Algebra 2 / Trig H HW #____ Name_____

Sections 14.4 and review

Date_____

Solve each trigonometric equation over the interval $0 \le x < 2\pi$.

1. $2 \cos x - 1 = 0$

2. $4 \sin^2 x = 3$

3. $2 \cos^2 x + 3 \cos x + 1 = 0$

4. $\cos^2 x - \cos x = 0$

5. $4 \cos^2 x = 2$

6. $2 \sin^2 x - \sin x - 1 = 0$

7. $\csc x = -2$

8. $\tan^2 x - 3 = 0$

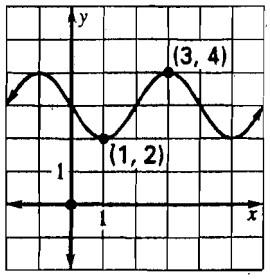
9. $\sin x + \cos x \tan x = \sqrt{3}$

10. $\sin x \cos x - 2 \sin x = 0$

Review (sections 14.2 and 14.5)

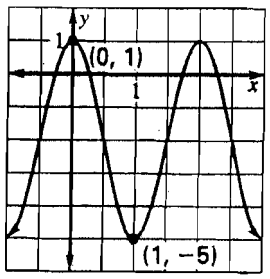
Write a function for the sinusoid. Give an equation for the function in ( ).

11.



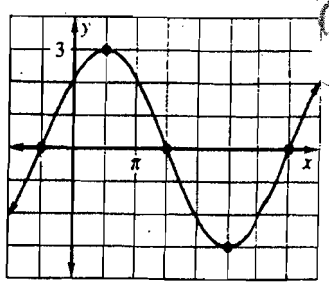
(cos)

12.



(sin)

13.



(Sin)

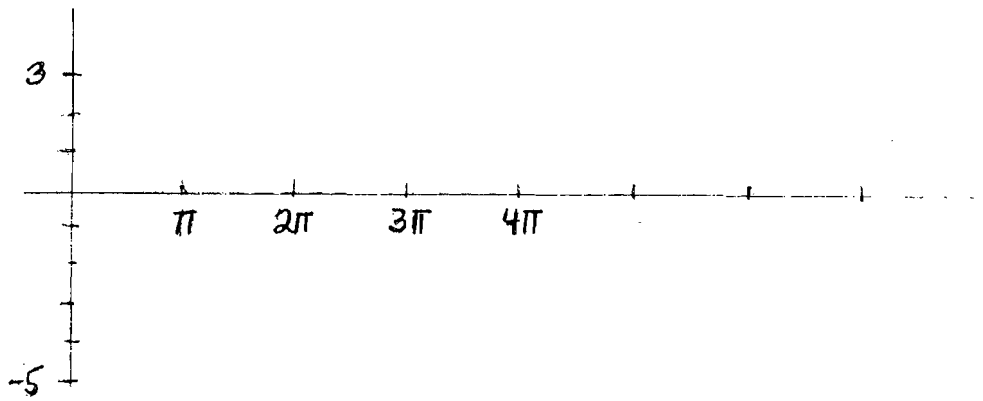
(cos)

14. minimum point (0, -3); maximum point (π , 3)

(cos)

(sin)

15. Graph $y = -2\sin\frac{1}{2}\left(x - \frac{\pi}{2}\right) - 3$.



Answers for 1-10: 1. $\frac{\pi}{3}, \frac{5\pi}{3}$; 2. $\frac{\pi}{3}, \frac{2\pi}{3}, \frac{4\pi}{3}, \frac{5\pi}{3}$; 3. $\frac{2\pi}{3}, \pi, \frac{4\pi}{3}$; 4. $0, \frac{\pi}{2}, \frac{3\pi}{2}$;

5. $\frac{\pi}{4}, \frac{3\pi}{4}, \frac{5\pi}{4}, \frac{7\pi}{4}$; 6. $\frac{\pi}{2}, \frac{7\pi}{6}, \frac{11\pi}{6}$; 7. $\frac{7\pi}{6}, \frac{11\pi}{6}$; 8. $\frac{\pi}{3}, \frac{2\pi}{3}, \frac{4\pi}{3}, \frac{5\pi}{3}$; 9. $\frac{\pi}{3}, \frac{2\pi}{3}$; 10. $0, \pi$