Algebra 2 / Trig—H HW #_____ Name_____

Review 14.1, 14.2, 14.4, 14.5

Date_____

1. State the amplitude, period, horizontal shift, vertical shift, and range for the graph of each equation:

   a) $y = -5\sin\frac{1}{4}(x + \pi) + 3$

   b) $y = \cos 2\pi(x - 3) - 4$

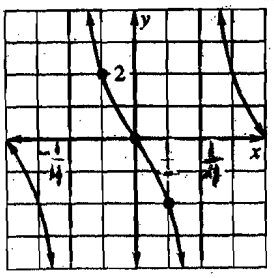
2. State the period and x-intercepts of the asymptotes of the graph of $y = 4\tan 2x$.

3. Write the equation for a trigonometric function:

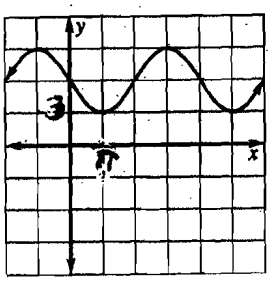
   a) cosine function with maximum at $(0, 3)$ and minimum at $\left(\frac{\pi}{2}, -1\right)$.

   b) sine function with amplitude 4, period $\frac{\pi}{4}$, horizontal shift $\frac{\pi}{2}$, vertical shift 1 and reflection in the line y = 1

c)



d)



(sin)

(cos)

4. Solve for x over the interval $0 \le x < 2\pi$.

a) $1 - \sin x = \sqrt{3}\cos x$

b) $3\sin x \sec x - 2\sqrt{3}\sin x = 0$

5. Solve for x over the interval $0° \le x < 360°$. Round angle measures to the nearest tenth.

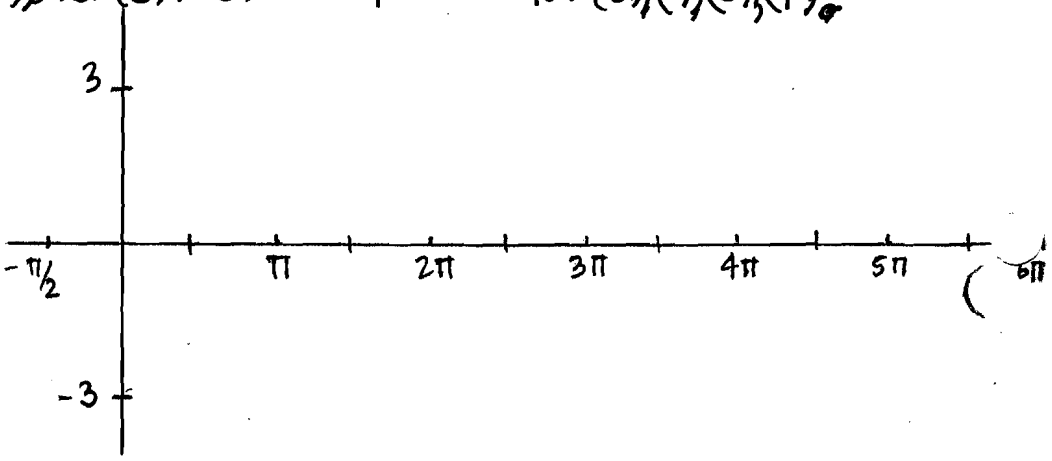
a) $\cos 3x = \dfrac{-1}{2}$

b) $\tan x - 2 - 3\cot x = 0$

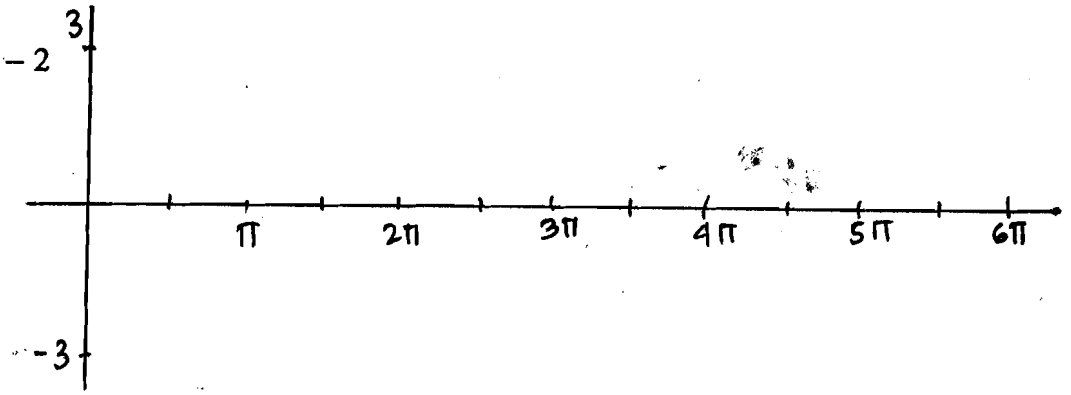
6. Graph.

Show 1 period for (b) and (c). Show 2 periods for (a), (e), (d), (f).

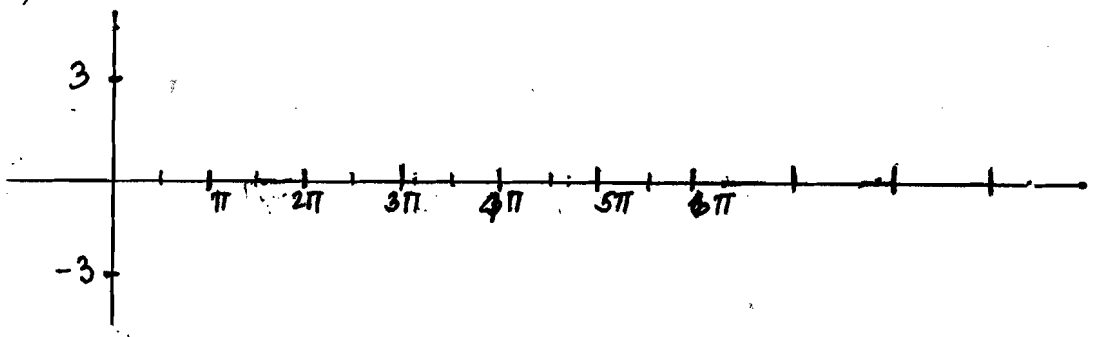
a) $y = -3\cos\left(x + \dfrac{\pi}{2}\right)$



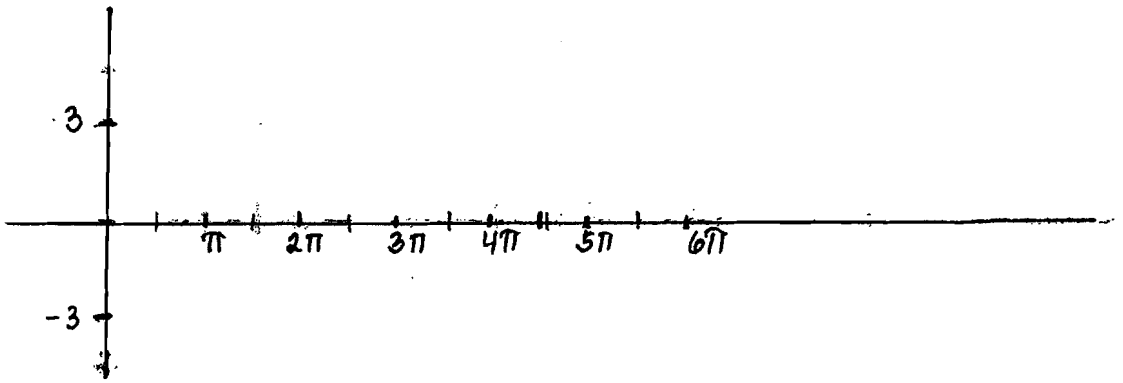
b) $y = \sin\frac{1}{3}\left(x - \frac{\pi}{2}\right) - 2$



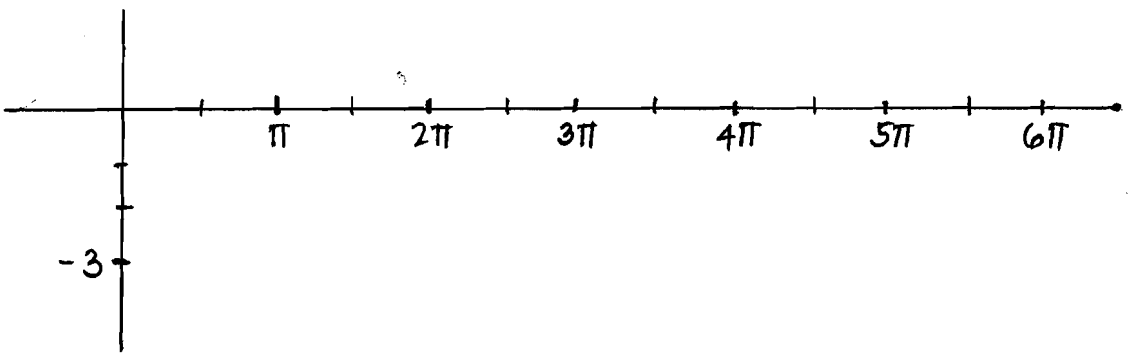
c) $y = 2\tan\frac{1}{4}(x - \pi) + 1$



d) $y = -3\csc 2x$



e) $y = \sec\frac{1}{3}x - 2$



f) $y = -2\cot 2x$