Pre-Calculus Honors Name_____ ID: 1

Solving Trig Equations

Date_____ Period____

Solve each equations on the interval $0 \le x < 2\pi$.

1) $2\sin^2 x - \sin x - 1 = 0$

2) $\cos^2 x + \cos x = 0$

3) $\tan x \cos x - \tan x = 0$

4) $\sqrt{2}\sin x \cos x - \sin x = 0$

5) $\cos 2x - \sin x - 1 = 0$

6) $\sin 2x - \cos x = 0$

7) $2\sin 2x - \sqrt{3} = 0$

8) $\sin 2x - \cos x = 0$

9) $4\cos^2 x - 3 = 0$

10) $1 + \cos^2 x = 2\cos^2 \frac{x}{2}$

11) $\cos \frac{x}{2} - \sin x = 0$

12) $2\cos \frac{x}{2} + 1 = 0$

Answers to Solving Trig Equations (ID: 1)

1) $\frac{\pi}{2}, \frac{7\pi}{6}, \frac{11\pi}{6}$

2) $\frac{\pi}{2}, \pi, \frac{3\pi}{2}$

3) $0, \frac{7\pi}{6}, \pi, \frac{11\pi}{6}$

4) $0, \frac{\pi}{4}, \pi, \frac{7\pi}{4}$

5) $0, \pi, \frac{7\pi}{6}, \frac{11\pi}{6}$

6) $\frac{\pi}{2}, \frac{\pi}{6}, \frac{5\pi}{6}, \frac{3\pi}{2}$

7) $\frac{\pi}{3}, \frac{\pi}{6}, \frac{4\pi}{3}, \frac{7\pi}{6}$

8) $\frac{\pi}{6}, \frac{\pi}{2}, \frac{5\pi}{6}, \frac{3\pi}{2}$

9) $\frac{\pi}{6}, \frac{5\pi}{6}, \frac{7\pi}{6}, \frac{11\pi}{6}$

10) $0, \frac{\pi}{2}, \frac{3\pi}{2}$

11) $\frac{\pi}{3}, \pi, \frac{5\pi}{3}$

12) $\frac{4\pi}{3}$