

⑨ $2\sin^2 x - \sin x - 1 = 0$ $x = \sin x$

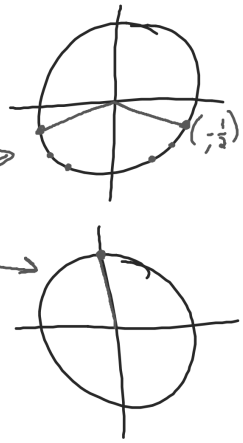
$2x^2 - x - 1 = 0$

$x^2 - x - 2 = 0$
 $(x+1)(x-2) = 0$

$2\sin x + 1 = 0$
 $\sin x = -\frac{1}{2}$

$(2x+1)(x-1) = 0$

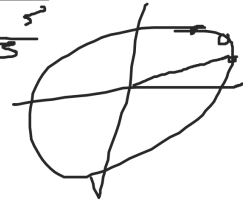
$\sin x - 1 = 0$
 $\sin x = 1$



Thursday -
 October 30,
 2014

⑦ $3\tan^2 2x - 1 = 0$

$\tan 2x = \frac{\sqrt{3}}{3}$
 $2x = \frac{\pi}{6}$
 $x = \frac{\pi}{12}$



④ $\cos^3 x = \cos x$ $[0, 2\pi]$

① $\cos x = -1$

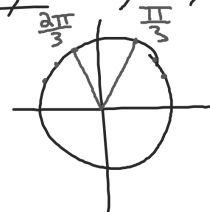
② $\cos x = 0$ $x = 0, \frac{\pi}{2}, \pi, \frac{3\pi}{2}$

③ $\cos x = 1$

U7 D4 - Multiple Angles

Solve (all solutions) 10/30/14

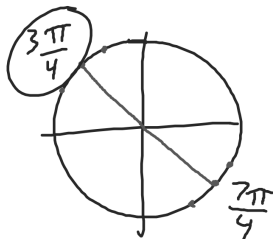
$\sin(4x) = \frac{\sqrt{3}}{2}$
 $\frac{4x}{4} = \frac{\pi}{3} \cdot \frac{1}{4}$ $\frac{4x}{4} = \frac{2\pi}{3} \cdot \frac{1}{4}$
 Period 4
 $x = \frac{\pi}{12} + \frac{\pi}{4}n$ $x = \frac{2\pi}{12} + \frac{\pi}{4}n$ $x = \frac{\pi}{6} + \frac{\pi}{4}n$



Solve $\cot \frac{1}{3}x = -1$

$3\left(\frac{1}{3}x\right) = \left(\frac{3\pi}{4}\right)$

$x = \frac{9\pi}{4} + 3\pi n$



Solve

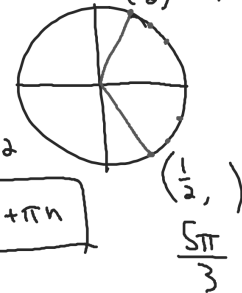
$\sec 2x + 1 = 3$
 $-1 -1$ $\frac{\pi}{3}$
 $(\frac{1}{2}, 1)$

$\sec 2x = 2$

$\cos 2x = \frac{1}{2}$
 $\frac{2x}{2} = \frac{\pi}{3} \cdot \frac{1}{2}$ $\frac{2x}{2} = \frac{5\pi}{3} \cdot \frac{1}{2}$

$x = \frac{\pi}{6} + \pi n$ $x = \frac{5\pi}{6} + \pi n$

☺



Solve on calculator $[0, 2\pi)$

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

↓