

## SOLVING TRIG EQUATIONS USING A GRAPHING CALCULATOR.

PE SOLVE  $25 \tan^2 x - 5 \tan x = 0$   $0 \leq x < 2\pi$

- NORMALLY YOU FACTOR + SOLVE

$$x_1 = 0$$

$$x_2 = \pi/6$$

$$x_3 = \frac{5\pi}{6}$$

$$x_4 = \pi$$

IE SOLVE  $4 \cos x = 6 \sec x - 5$   $0 \leq x < 2\pi$

$$y_1 \quad y_2$$

$$x_1 = .7227$$

$$x_2 = 5.5604$$

GENERAL SOLUTION?

$$\left. \begin{aligned} x_1 &= .7227 + 2n\pi \\ x_2 &= 5.5604 + 2n\pi \end{aligned} \right\} n \in \mathbb{Z}$$

IB  $3^x - 6 = 8 \sin x \quad 0 \leq x < 2\pi$

$$x_1 = 1.7687$$

IE  $3 \sec^2(x) + 2 \cot(x) = 1 \quad 0 \leq x < 2\pi$

$$\underbrace{3 \sec^2(x) + 2 \cot(x)}_{y_1} = 1 \quad \underbrace{\phantom{3 \sec^2(x) + 2 \cot(x)}}_{y_2}$$

$$\boxed{x_2 = 5.895 \quad x_1 = 2.7535}$$

H/w Pg 47 SECT 6.9 #1