

**Warm Up:** Give all possible values of  $\theta$  from  $0^\circ \leq \theta \leq 360^\circ$

a)  $\sin\theta = 0.8081$

b)  $\cos\theta = -\frac{\sqrt{3}}{2}$

Solving trig equations is similar to solving regular algebraic equations:

$2\sin\theta - \sqrt{3} = 0$  is similar to solving  $2x - \sqrt{3} = 0$ , where  $x = \sin\theta$

**Example 1:** Solve for  $\theta$  for  $0^\circ \leq \theta \leq 360^\circ$

a)  $4\cos\theta = \cos\theta + 2$  (combine like terms and isolate  $\cos\theta$ )

b)  $2\sin^2\theta - 6 = 0$

c)  $3\sin^2\theta + 3\sin\theta = 0$

d)  $2\cos^2\theta - 1 = 0$

e)  $2\sin^2\theta - 7\sin\theta + 3 = 0$

(similar to solving  $2x^2 - 7x + 3 = 0$ )