

## QUADRATICS

SEPT 30/08

FACTOR  $3x^2 + 7x + 2$

$$(3x + 1)(x + 2)$$

$$x^2 - 9$$

$$(x + 3)(x - 3)$$

$$\sin^2 \theta - 1$$

$$(\sin \theta + 1)(\sin \theta - 1)$$

SOLVE

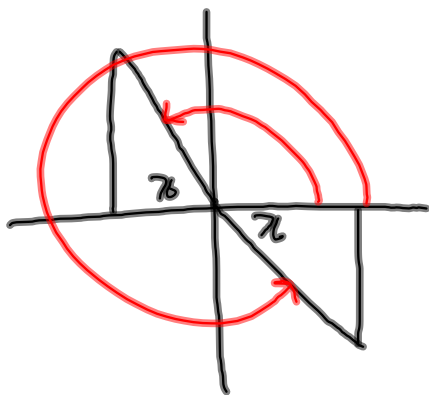
$$\frac{\text{TAN } \theta}{4} + 1 = 0$$

$$\swarrow \left( \frac{\text{TAN } \theta}{\swarrow 4} \right) = \swarrow (-1)$$

|   |   |
|---|---|
| S | A |
| T | C |

$$\text{TAN } \theta = -4$$

$$\theta_r = \text{TAN}^{-1}(4) = 76^\circ$$



$$\theta = 180 - 76 = 104^\circ$$

$$\theta = 360 - 76 = 284^\circ$$

SOLVE  $x^2 = 4$

$$\sqrt{x^2} = \sqrt{4}$$

$$x = \pm 2$$

$$\text{SOLVE } 3 \cos^2 \theta - 1 = 0$$

$$\frac{3 \cos^2 \theta}{3} = \frac{1}{3}$$

$$\sqrt{\cos^2 \theta} = \sqrt{\frac{1}{3}}$$

$$\cos \theta = \pm \sqrt{\frac{1}{3}}$$

$$\theta_1 = \cos^{-1}\left(\sqrt{\frac{1}{3}}\right) = 55^\circ$$

$$\theta_1 = 55^\circ$$

$$\theta_2 = 180 - 55 = 125^\circ$$

$$\theta_3 = 180 + 55 = 235^\circ$$

$$\theta_4 = 360 - 55 = 305^\circ$$

SOLVE

$$2 \tan^2 \theta - \tan \theta - 1 = 0$$

$$(2 \tan \theta + 1)(\tan \theta - 1) = 0$$

$$2 \tan \theta + 1 = 0 \quad \tan \theta - 1 = 0$$

$$\tan \theta = -\frac{1}{2} \quad \tan \theta = 1$$

$$\theta_r = \tan^{-1}\left(\frac{1}{2}\right)$$

$$\theta_r = \tan^{-1}(1)$$

$$\theta_r = 27^\circ$$

$$\theta_r = 45^\circ$$

|     |     |
|-----|-----|
| S   | (A) |
| (T) | C   |

$$\theta = 180 - 27 = 153^\circ$$

$$\theta = 45^\circ$$

$$\theta = 360 - 27 = 333^\circ$$

$$\theta = 180 + 45 = 225^\circ$$

Ex #13 Q# 1-9, 13, 14, 16