

Assignment : Trigonometric Equation

Solve each equation for $0 \leq \theta < 2\pi$.

1) $2\sin \theta \cos \theta + \sqrt{2}\sin \theta - \cos \theta = -\cos \theta$

2) $2\tan \theta - \tan^2 \theta + 4 = 5$

3) $\sin \theta \tan \theta - \sin \theta = -2\sin \theta$

4) $-1 + \sin \theta = -2\sin^2 \theta$

5) $3\cos \theta + 2\sin \theta = \sqrt{3}\sin \theta + 2\sin \theta$

6) $0 = \sqrt{3}\cos \theta + \sin \theta$

7) $1 - \sin \theta = \cos \theta - 2\sin \theta$

8) $\sin \theta + 1 - 2\cos \theta = -3\cos \theta$

9) $-1 + 2\sin \theta = -\cos \theta + \sin \theta$

10) $0 = \sqrt{3}\cos \theta - \sin \theta$

Answers to Assignment : Trigonometric Equation

$$1) \left\{ 0, \frac{3\pi}{4}, \pi, \frac{5\pi}{4} \right\}$$

$$5) \left\{ \frac{\pi}{3}, \frac{4\pi}{3} \right\}$$

$$9) \left\{ 0, \frac{\pi}{2} \right\}$$

$$2) \left\{ \frac{\pi}{4}, \frac{5\pi}{4} \right\}$$

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

$$10) \left\{ \frac{\pi}{3}, \frac{4\pi}{3} \right\}$$

$$3) \left\{ 0, \frac{3\pi}{4}, \pi, \frac{7\pi}{4} \right\}$$

$$7) \left\{ 0, \frac{3\pi}{2} \right\}$$

$$4) \left\{ \frac{\pi}{6}, \frac{5\pi}{6}, \frac{3\pi}{2} \right\}$$

$$8) \left\{ \pi, \frac{3\pi}{2} \right\}$$

