

Assignment

Date _____ Period _____

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

1) $7\sin^2 \theta = 1 + 3\sin^2 \theta$

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

3) $0 = -2\tan \theta \sin \theta + \sqrt{2}\tan \theta$

4) $-2\cos \theta = -\cos \theta \sin \theta - \cos \theta$

5) $-\cos \theta + 5\cos^2 \theta = 1 + 3\cos^2 \theta$

6) $2\sin \theta - \cos^2 \theta + 2 = 0$

7) $\tan^2 \theta = \sqrt{3}\tan \theta$

8) $2\cos^2 \theta - \cos \theta = \cos^2 \theta$

9) $-\cos 2\theta = -3\cos \theta + 2$

10) $0 = \cos 2\theta - \cos \theta$

11) $\cos^2 \theta = -3\cos^2 \theta + \sin^2 2\theta$

12) $-\sqrt{2}\sin \theta - 2\sin 2\theta = -3\sin 2\theta$

Answers to Assignment (ID: 1)

1) $\left\{\frac{\pi}{6}, \frac{5\pi}{6}, \frac{7\pi}{6}, \frac{11\pi}{6}\right\}$

5) $\left\{0, \frac{2\pi}{3}, \frac{4\pi}{3}\right\}$

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

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

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

10) $\left\{0, \frac{2\pi}{3}, \frac{4\pi}{3}\right\}$

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

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

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

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

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

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