Precalculus Name_____

REDEMPTION [Solving Trig Equations]

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

1) $-7 = -3 + 2\csc\theta$

2) $6\csc^2\theta - 4 = 3\csc^2\theta$

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

4) $-2\cot\theta = -\csc\theta + \sqrt{3}\csc\theta\cot\theta - 2\cot\theta$

5) $-1 + 3\cot^2\theta = -2\cot\theta + 4\cot^2\theta$

6) $2\sec\theta\cos\theta + \sec\theta = 2\sec\theta$

Precalculus Name_____

REDEMPTION [Solving Trig Equations]

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

1) $-7 = -3 + 2\csc\theta$

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

2) $6\csc^2\theta - 4 = 3\csc^2\theta$

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

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

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

4) $-2\cot\theta = -\csc\theta + \sqrt{3}\csc\theta\cot\theta - 2\cot\theta$

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

5) $-1 + 3\cot^2\theta = -2\cot\theta + 4\cot^2\theta$

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

6) $2\sec\theta\cos\theta + \sec\theta = 2\sec\theta$

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