M126 Worksheet 6.3 - Trig Equations II Name_____

1) Solve the equation for solutions in the interval [0, 2π).
$\cos 2x = \sqrt{2} - \cos 2x$

2) Solve the equation for solutions in the interval [0°, 360°). Round to the nearest degree $\sin 2\theta = \cos \theta$

3) Solve the equation for solutions in the interval [0°, 360°). Round to the nearest degree. $\cos^2 \frac{\theta}{2} = 1$

4) Solve, finding all solutions in [0, 2π).
$\sin x = \sqrt{2} \cos (\frac{x}{2})$

5) **EXTRA Practice** Solve the equation for solutions in the interval [0, 2π).
$\sin x \cos x = \frac{1}{2}$

Answer Key
Testname: WORKSHEET 6.3 - TRIG EQUATIONS IITST

1) $\left\{\frac{\pi}{8}, \frac{9\pi}{8}, \frac{7\pi}{8}, \frac{15\pi}{8}\right\}$
2) {30°, 90°, 150°, 270°}
3) {0°}
4) $x = \frac{\pi}{2}, \pi, \frac{3\pi}{2}$
5) $x = \frac{\pi}{4}, \frac{5\pi}{4}$