

Name: _____

5.3-5.5 Assignment Alg2/Trig Honors

Solve each equation on the interval $[0, 2\pi)$.

1. $\sin(x) = \sqrt{3} - \sin(x)$

2. $\cos^3(x) = \cos(x)$

3. $2 \sin(2x) - \sqrt{2} = 0$

Find the exact values using sum and difference formulas. Answers should not be decimals!!!

4. $\sin 285^\circ$

5. $\cos(300^\circ + 45^\circ)$

6. $\sin\left(\frac{11\pi}{6} + \frac{\pi}{4}\right)$

7. $\cos 60^\circ \cos 15^\circ + \sin 60^\circ \sin 15^\circ$

Find the exact solutions on the interval $[0, 2\pi)$. Answers should not be decimals!!!

8. $\sin(2x) \cos(x) = \sin(x)$

9. $\cos(2x) = -2 \cos^2(x)$

10. $\cos(2x) = 3 \sin(x) + 2$

11. $\frac{\sin(2x)}{2 \cos(x)} = 0$