

## Solving Trig Equations

Date \_\_\_\_\_ Period \_\_\_\_\_

**Find solutions in radians**

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

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

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

4)  $5\cos^2 \theta = \sqrt{2}\cos \theta + 3\cos^2 \theta$

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

6)  $2\tan \theta = 1 + \tan^2 \theta$

7)  $-3 = -2\cos^2 \theta - 2 + \cos \theta$

8)  $-2\sin^2 \theta = -\sin \theta - 4\sin^2 \theta$

9)  $\cos^2 \theta + 2 = 2\cos \theta + 1$

10)  $2 = -4\sin^2 \theta + 5$

**Find solutions in degrees.**

11)  $3\csc \theta = 0$

12)  $-6\csc \theta = -4\sqrt{3}$

13)  $-\frac{1}{4} \cdot \csc \theta = \frac{1}{2}$

14)  $-2\cot \theta = 0$

15)  $-4\sqrt{3} = -4\cot \theta$

16)  $\frac{1}{4} \cdot \cot \theta = \frac{1}{4}$

$$17) -2\sqrt{3} = 3\csc \theta$$

$$18) 5 + \sec \theta = \frac{15 + 2\sqrt{3}}{3}$$

$$19) \frac{\sqrt{3}}{5} = \frac{3}{5} \cdot \cot \theta$$

$$20) -4\sqrt{2} = 4\sec \theta$$