

HAT 5/17/18

Solving Trig Equations

(Work on another sheet of paper)

Name: \_\_\_\_\_

Find the solutions:

- On the domain  $[0, 2\pi)$
- On the domain  $(-\infty, \infty)$

1)  $2\cos 2\theta + \sqrt{3} = 0$

2)  $4\sin^2 3\theta = 3$

3)  $\tan 2\theta \sec 2\theta = \tan 2\theta$

4)  $2\sin \theta \cos \theta = \sqrt{2} \cos \theta$

5)  $2\sin^2 3\theta + \sin 3\theta = 0$

6)  $2\cos^2 \theta - 5\cos \theta + 2 = 0$

7)  $3\cos \theta - 1 = 2\cos^2 \theta$

8)  $2\sec^2 \theta - 3\sec \theta - 2 = 0$

9)  $\sin^2 \frac{\theta}{2} + 5\sin \frac{\theta}{2} + 6 = 0$

10)  $\tan^2 \theta - \sec \theta - 1 = 0$

11)  $3 - 3\sin \theta - 2\cos^2 \theta = 0$

12)  $4\sin 2\theta \cos 2\theta = \sqrt{3}$

13)  $\cos^2 \theta - 4 = 3\cos \theta$

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

15)  $\cos^2 2\theta - 4\cos 2\theta = 5$

16)  $6\sin^2 3\theta - 7\sin 3\theta + 2 = 0$