

Math 1613 - Trigonometry

Discussion Board Week 7 - Due 2019.07.21

Find exact solutions over the indicated interval.

1. $2 \sin(2x) = \sqrt{3}, \quad 0 \leq x \leq \pi$
2. $1 - 2\sqrt{2} \sin(x) \cos(x) = 0, \quad 0 \leq x \leq \pi$
3. $\sin(2x) + \cos(x) = 0, \quad -\infty < x < \infty$
4. $\sin^2(\theta) + 2 \cos(\theta) = -2, \quad 0 \leq \theta < 2\pi$
5. $2 \cos^2(\theta) + 3 \sin(\theta) = 0, \quad 0 \leq \theta < 2\pi$
6. $4 \cos^2(2z) - 4 \cos(2z) + 1 = 0, \quad 0 \leq z \leq \pi$
7. $\cos(x) = \cot(x), \quad 0 \leq x < 2\pi$
8. $4 \cos^2(x) - 3 = 0, \quad 0 \leq x \leq 2\pi$
9. $\sin(x) \cos(x) = \frac{1}{2}, \quad 0 \leq x \leq \pi$
10. $\cos^2(\theta) = \frac{1}{2} \sin(2\theta), \quad -\infty < \theta < \infty$
11. $2 \sin^2(\theta) + \sin(2\theta) = 0, \quad -\infty < \theta < \infty$
12. $\cos(x) - \sin(x) = 1, \quad 0 \leq x < 2\pi$
13. $\cos(3x) - \cos(x) = \sin(x), \quad 0 \leq x \leq \pi$
14. $2 \cos^2(\theta) = 3 \sin(\theta) + 3, \quad -\infty < \theta < \infty$
15. $\sin(5x) - \sin(3x) = \sin(x), \quad 0 \leq x \leq \pi/2$