Trigonometry Worksheet 7 - Answers

1. Solve
$$2\sin\theta+1=0$$
 for $\theta\in[0,2\pi)$.
$$\theta=210^\circ, \text{ and } 330^\circ.$$

6. Solve
$$\sin \theta = \sqrt{2} - \sin \theta$$
. $\theta = 45^{\circ}, 135^{\circ}$.

2. Solve
$$2\cos\theta = 1$$
 for $\theta \in [0, 2\pi)$. $\theta = 60^{\circ}$, and 300° .

7. Solve
$$2\cos^2\theta - 1 = \cos\theta$$
 for $\theta \in [0, 2\pi)$. $\theta = 30^\circ, 210^\circ$, and 180° .

3. Solve
$$2 \tan^2 \theta - 6 = 0$$
 for $\theta \in [0, 2\pi)$.
 $\theta = 60^{\circ}, 120^{\circ}, 240^{\circ}, \text{ and } 300^{\circ}.$

8. Solve
$$2\cos^2\theta = \sin\theta + 1$$
 for $\theta \in [0, 2\pi)$.
 $\theta = 60^{\circ}, 120^{\circ}, \text{ and } 270^{\circ}.$

4. Solve
$$2\cos\theta = \sqrt{3}$$
 for $\theta \in [0, 2\pi)$.
$$\theta = 30^{\circ}, 330^{\circ}.$$

9. Solve
$$2\cos(2\theta) = 0$$
 for $\theta \in [0, 2\pi)$. $\theta = 45^{\circ}, 135^{\circ}, 225^{\circ}, \text{ and } 315^{\circ}.$

5. Solve
$$\tan \theta + 2 = 1$$
. $\theta = 135^{\circ}, 315^{\circ}$.

10. Solve
$$\sin(2\theta) = \frac{3}{2}$$
 for $\theta \in [0, 2\pi)$.
 $\theta = 30^{\circ}, 60^{\circ}, 210^{\circ}, \text{ and } 240^{\circ}.$

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