

Solving Trig Equations - QUIZ PRACTICE

Solve each equation for $0 \leq \theta < 360$.

1) $-5 + \sin \theta = -\frac{11}{2}$

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

3) $0 = \frac{1}{3} \cdot \cos \frac{\theta}{2}$

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

Solve each equation for $0 \leq \theta < 2\pi$.

$$5) -2 + \cos \theta = -\frac{5}{2}$$

$$6) -\sqrt{2} = -2\sin \theta$$

$$7) -2 + \sin -4\theta = -\frac{5}{2}$$

$$8) -\frac{2}{5} \cdot \cos -4\theta = -\frac{\sqrt{3}}{5}$$

Find ALL solutions to each equation in degrees.

9) $-\sin \theta = 1$

10) $\frac{2}{5} \cdot \cos \theta = -\frac{1}{5}$

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

12) $\frac{10 - \sqrt{3}}{2} = 5 + \cos 4\theta$

Find ALL solutions to each equation in radians.

$$13) \frac{4 - \sqrt{2}}{2} = 2 + \sin \theta$$

$$14) 4\cos \theta = -2\sqrt{2}$$

$$15) 4 + \sin 4\theta = \frac{8 + \sqrt{2}}{2}$$

$$16) -2\sqrt{2} = 4\cos 4\theta$$

Solving Trig Equations - QUIZ PRACTICE

Solve each equation for $0 \leq \theta < 360$.

1) $-5 + \sin \theta = -\frac{11}{2}$

$\{210, 330\}$

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

$\{45, 315\}$

3) $0 = \frac{1}{3} \cdot \cos \frac{\theta}{2}$

$\{180\}$

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

$\{15, 75, 195, 255\}$

Solve each equation for $0 \leq \theta < 2\pi$.

$$5) -2 + \cos \theta = -\frac{5}{2}$$

$$\left\{ \frac{2\pi}{3}, \frac{4\pi}{3} \right\}$$

$$6) -\sqrt{2} = -2\sin \theta$$

$$\left\{ \frac{\pi}{4}, \frac{3\pi}{4} \right\}$$

$$7) -2 + \sin -4\theta = -\frac{5}{2}$$

$$\left\{ \frac{\pi}{24}, \frac{5\pi}{24}, \frac{13\pi}{24}, \frac{17\pi}{24}, \frac{25\pi}{24}, \frac{29\pi}{24}, \frac{37\pi}{24}, \frac{41\pi}{24} \right\}$$

$$8) -\frac{2}{5} \cdot \cos -4\theta = -\frac{\sqrt{3}}{5}$$

$$\left\{ \frac{\pi}{24}, \frac{11\pi}{24}, \frac{13\pi}{24}, \frac{23\pi}{24}, \frac{25\pi}{24}, \frac{35\pi}{24}, \frac{37\pi}{24}, \frac{47\pi}{24} \right\}$$

Find ALL solutions to each equation in degrees.

9) $-\sin \theta = 1$

$$\{270 + 360n\}$$

10) $\frac{2}{5} \cdot \cos \theta = -\frac{1}{5}$

$$\{120 + 360n, 240 + 360n\}$$

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

$$\{60 + 180n, 30 + 180n\}$$

12) $\frac{10 - \sqrt{3}}{2} = 5 + \cos 4\theta$

$$\left\{ \frac{75}{2} + 90n, \frac{105}{2} + 90n \right\}$$

Find ALL solutions to each equation in radians.

$$13) \frac{4 - \sqrt{2}}{2} = 2 + \sin \theta$$

$$\left\{ \frac{5\pi}{4} + 2\pi n, \frac{7\pi}{4} + 2\pi n \right\}$$

$$14) 4\cos \theta = -2\sqrt{2}$$

$$\left\{ \frac{3\pi}{4} + 2\pi n, \frac{5\pi}{4} + 2\pi n \right\}$$

$$15) 4 + \sin 4\theta = \frac{8 + \sqrt{2}}{2}$$

$$\left\{ \frac{3\pi}{16} + \frac{\pi n}{2}, \frac{\pi}{16} + \frac{\pi n}{2} \right\}$$

$$16) -2\sqrt{2} = 4\cos 4\theta$$

$$\left\{ \frac{3\pi}{16} + \frac{\pi n}{2}, \frac{5\pi}{16} + \frac{\pi n}{2} \right\}$$