

FURTHER SOLUTION OF TRIGONOMETRIC EQUATIONS

1 Solve for $0 \leq x \leq 2\pi$:

(a) $\sin(2x) = 0.5$

(b) $\cos(3x) = 1$

(c) $\tan(2x) = 1$

FURTHER SOLUTION OF TRIGONOMETRIC EQUATIONS

2 Solve for $-\pi \leq x \leq \pi$:

(a) $\tan\left(\frac{x}{2}\right) = \frac{1}{\sqrt{3}}$

(b) $\sin\left(\frac{x}{3}\right) = -\frac{\sqrt{3}}{2}$

(c) $\cos\left(\frac{x}{4}\right) = \frac{1}{\sqrt{2}}$

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3 Solve, for $0 \leq x \leq 2\pi$:

(a) $2 \cos\left(x - \frac{\pi}{6}\right) = 1$

(b) $\sqrt{2} \sin\left(x + \frac{\pi}{4}\right) = 1$

(c) $2 \cos\left(x - \frac{\pi}{3}\right) = \sqrt{3}$

FURTHER SOLUTION OF TRIGONOMETRIC EQUATIONS

4 Solve, for $-\pi \leq x \leq \pi$:

(a) $\sqrt{2} \cos 2x = 1$

(b) $\cos\left(2x - \frac{\pi}{2}\right) = 1$

(c) $\sin\left(2x + \frac{\pi}{6}\right) = -1$

FURTHER SOLUTION OF TRIGONOMETRIC EQUATIONS

- 5 (a)** Solve, for $0 \leq x \leq 2\pi$, $\sqrt{2} \cos\left(\frac{x}{2} + \frac{\pi}{6}\right) = 1$. **(b)** Solve, for $-3\pi \leq x \leq 3\pi$, $\tan\left(\frac{x}{3} - \frac{\pi}{6}\right) = 1$.

FURTHER SOLUTION OF TRIGONOMETRIC EQUATIONS

7 Solve over the given domain

(a) $\cos x + 3 \sin x = 1$ for $0 \leq x \leq 2\pi$

(b) $\sin 2x = 1 + \cos 2x$ for $0 \leq x \leq \pi$