

Find all solutions of the equation.

1) $2 \cos x - 1 = 0$

A) $x = \frac{4\pi}{3} + 2n\pi$ or $x = \frac{5\pi}{6} + 2n\pi$

B) $x = \frac{4\pi}{3} + n\pi$ or $x = \frac{5\pi}{6} + n\pi$

C) $x = \frac{\pi}{3} + 2n\pi$ or $x = \frac{5\pi}{3} + 2n\pi$

D) $x = \frac{\pi}{3} + n\pi$ or $x = \frac{5\pi}{3} + n\pi$

1) _____

Solve the equation on the interval $[0, 2\pi)$.

2) $\cos 2x = \frac{\sqrt{2}}{2}$

A) 0

B) $\frac{\pi}{8}, \frac{7\pi}{8}, \frac{9\pi}{8}, \frac{15\pi}{8}$

C) no solution

2) _____

3) $\cos^2 x + 2 \cos x + 1 = 0$

A) $\frac{\pi}{4}, \frac{7\pi}{4}$

B) $\frac{\pi}{2}, \frac{3\pi}{2}$

C) 2π

D) π

3) _____

4) $2 \sin^2 x = \sin x$

A) $\frac{\pi}{6}, \frac{5\pi}{6}$

B) $\frac{\pi}{2}, \frac{3\pi}{2}, \frac{\pi}{3}, \frac{2\pi}{3}$

C) $\frac{\pi}{3}, \frac{2\pi}{3}$

D) $0, \pi, \frac{\pi}{6}, \frac{5\pi}{6}$

4) _____

5) $\cos x = \sin x$

A) $\frac{3\pi}{4}, \frac{5\pi}{4}$

B) $\frac{\pi}{4}, \frac{5\pi}{4}$

C) $\frac{\pi}{4}, \frac{7\pi}{4}$

D) $\frac{3\pi}{4}, \frac{7\pi}{2}$

5) _____

6) $\sin^2 x + \sin x = 0$

A) $0, \pi, \frac{\pi}{3}, \frac{5\pi}{3}$

B) $0, \pi, \frac{3\pi}{2}$

C) $0, \pi, \frac{4\pi}{3}, \frac{5\pi}{3}$

D) $0, \pi, \frac{\pi}{3}, \frac{2\pi}{3}$

6) _____

Solve the equation on the interval $[0, 2\pi)$.

7) $(\tan x - 1)(\cos x - 1) = 0$

A) $\frac{\pi}{4}, \pi, \frac{5\pi}{4}$

B) $0, \frac{\pi}{4}, \frac{5\pi}{4}$

C) $0, \frac{3\pi}{4}, \frac{7\pi}{4}$

D) $\frac{3\pi}{4}, \pi, \frac{7\pi}{4}$

7) _____

Solve the equation on the interval $[0, 2\pi)$.

8) $\tan 2x - \tan x = 0$

A) $\frac{\pi}{4}, \frac{5\pi}{4}$

B) 0

C) $0, \pi$

D) $\frac{\pi}{12}, \frac{\pi}{6}, \frac{2\pi}{3}, \frac{7\pi}{12}, \frac{7\pi}{6}, \frac{13\pi}{12}, \frac{5\pi}{3}$

8) _____

9) $\sin 2x + \sin x = 0$

A) $0, \frac{2\pi}{3}, \pi, \frac{4\pi}{3}$

B) $\frac{\pi}{4}, \frac{3\pi}{4}, \frac{5\pi}{4}, \frac{7\pi}{4}$

C) $\frac{\pi}{8}, \frac{9\pi}{8}$

D) no solution

9) _____

Answer Key

Testname: PRACTICE12

- 1) C
- 2) B
- 3) D
- 4) D
- 5) B
- 6) B
- 7) B
- 8) C
- 9) A