

$$1. \quad a) \quad \left. \begin{array}{l} x = \frac{2\pi}{3} + 2\pi k \\ x = \frac{4\pi}{3} + 2\pi k \end{array} \right\} k \in \mathbf{Z}$$

$$b) \quad \left. \begin{array}{l} x = \frac{\pi}{6} + 2\pi k \\ x = \frac{7\pi}{6} + 2\pi k \end{array} \right\} k \in \mathbf{Z}$$

$$2. \quad a) \quad \left. \begin{array}{l} \theta = 45^\circ + 360^\circ k \\ \theta = 135^\circ + 360^\circ k \end{array} \right\} k \in \mathbf{Z}$$

$$b) \quad \left. \begin{array}{l} \theta = 135^\circ + 360^\circ k \\ \theta = 315^\circ + 360^\circ k \end{array} \right\} k \in \mathbf{Z}$$

$$3. \quad a) \quad x = \frac{\pi}{4}, \frac{3\pi}{4}, \frac{5\pi}{4}, \frac{7\pi}{4}$$

$$b) \quad x = \frac{3\pi}{2}, \frac{7\pi}{6}, \frac{11\pi}{6}$$

$$4. \quad a) \quad \theta = 0^\circ, 180^\circ, 120^\circ, 240^\circ$$

$$b) \quad \theta = 210^\circ, 330^\circ$$

$$5. \quad \theta = 30^\circ, 120^\circ, 210^\circ, 300^\circ$$

$$6. \quad x = \frac{3\pi}{8}, \frac{15\pi}{8}$$

$$7. \quad a) \quad \theta = 30^\circ + 120^\circ k, k \in \mathbf{Z}$$

$$8. \quad \left. \begin{array}{l} x = \frac{\pi}{6} + \frac{\pi}{2}k \\ x = \frac{\pi}{3} + \frac{\pi}{2}k \end{array} \right\} k \in \mathbf{Z}$$

$$9. \quad \theta = 160^\circ, 340^\circ$$

$$10. \quad x = \frac{\pi}{12}, \frac{7\pi}{12}$$