

Pre-Calc AB PreComp Review Trig Equations : Answers

1. (a) No Solution

(b) $x = \frac{2\pi}{3}, \frac{4\pi}{3}$

(c) $x = \frac{\pi}{6}, \frac{7\pi}{6}$

(d) $x = \frac{\pi}{3}, \frac{2\pi}{3}, \frac{4\pi}{3}, \frac{5\pi}{3}$

(e) $x = \frac{\pi}{6}, \frac{5\pi}{6}$

(f) $x = 120^\circ$

(g) $x = 180^\circ$

(h) $x = 60^\circ, 120^\circ, 240^\circ, 300^\circ$

2. (a) (i) $x = \frac{3\pi}{8}, \frac{5\pi}{8}, \frac{11\pi}{8}, \frac{13\pi}{8}$

(ii) $x = \frac{3\pi}{8}, \frac{5\pi}{8}, -\frac{3\pi}{8}, -\frac{5\pi}{8}$

(b) (i) $x = \frac{\pi}{6}, \frac{\pi}{2}, \frac{5\pi}{6}, \frac{7\pi}{6}, \frac{3\pi}{2}, \frac{11\pi}{6}$

(ii) $x = \frac{\pi}{6} + \frac{2\pi}{3}k, \frac{\pi}{2} + \frac{2\pi}{3}k,$
where k is an integer

(c) (i) $x = -\pi$

(ii) No Solution

3. $x = \frac{\pi}{4} + \pi k, \frac{3\pi}{4} + \pi k,$
where k is an integer

4. (a) 10 (b) 4 (c) 8