Trigonometric Equations pt.1

Answer Key

13.1. 1) πk; 2) $(-1)^k \dfrac{\pi}{6} + \pi k$; 3) $(-1)^k \dfrac{\pi}{4} + \pi k$; 4) $(-1)^k \dfrac{\pi}{3} + \pi k$; 5)

$(-1)^{k+1} \dfrac{\pi}{4} + \pi k$; 6) $-\dfrac{\pi}{2} + 2\pi k$; 7) $(-1)^{k+1} \dfrac{\pi}{12} + \dfrac{\pi}{3}k$; 8) $\dfrac{3}{2}\pi + 6\pi k$; 9)

$(-1)^k \dfrac{\pi}{20} + \dfrac{\pi}{5}k - \dfrac{\pi}{30}$; 10) $(-1)^{k+1}\pi - 3\pi k + \dfrac{\pi}{3}$; 11) $(-1)^{k+1}\pi + 3\pi k + \dfrac{\pi}{2}$; 12)

$\dfrac{5\pi}{16} - \dfrac{\pi k}{2}$. **13.2.** 1) $\dfrac{\pi}{2} + \pi k$; 2) $\pm \dfrac{\pi}{3} + 2\pi k$; 3) $\pm \dfrac{\pi}{6} + 2\pi k$; 4) $\pm \dfrac{\pi}{4} + 2\pi k$;

5) $\pm \dfrac{2\pi}{3} + 2\pi k$; 6) $\pi + 2\pi k$; 7) $\pm \dfrac{3}{20}\pi + \dfrac{2}{5}\pi k$; 8) $\pm \dfrac{4}{3}\pi + 8\pi k$; 9)

$\dfrac{\pi}{45} \pm \dfrac{\pi}{30} - \dfrac{2\pi k}{5}$; 10) $\dfrac{13}{18}\pi + \dfrac{4}{3}\pi k$; 11) $\dfrac{\pi}{9} + 4\pi k$; 12) $\pm \dfrac{2\pi}{3} + \pi - 6\pi k$.

13.3. 1) πk; 2) $\dfrac{\pi}{3} + \pi k$; 3) $\dfrac{\pi}{4} + \pi k$; 4) $\dfrac{\pi}{6} + \pi k$; 5) $-\dfrac{\pi}{3} + \pi k$; 6)

$-\dfrac{\pi}{4} + \pi k$; 7) $-\dfrac{7}{24}\pi + \dfrac{\pi}{2}k$; 8) $-\dfrac{\pi}{5}k$; 9) $25° + 60°k$; 10) $-\dfrac{\pi}{4} + 3\pi k$.