

Trigonometric Equations pt.1

Trigonometrische Vergelijkingen

$\operatorname{tg}(\cdot) = \tan(\cdot)$

13.1. 1) $\sin x = 0$; 2) $\sin x = \frac{1}{2}$;

3) $\sin x = \frac{\sqrt{2}}{2}$; 4) $\sin x = \frac{\sqrt{3}}{2}$;

5) $\sin x = -\frac{\sqrt{2}}{2}$; 6) $\sin x = -1$;

7) $\sin 3x = -\frac{1}{\sqrt{2}}$; 8) $\sin \frac{x}{3} = 1$;

9) $\sin(5x + 30^\circ) = \frac{1}{\sqrt{2}}$; 10) $\sin\left(20^\circ - \frac{x}{3}\right) = \frac{\sqrt{3}}{2}$;

11) $\sin\left(\frac{x}{3} - \frac{\pi}{6}\right) = -\frac{\sqrt{3}}{2}$; 12) $\sin\left(\frac{3}{4}\pi - 4x\right) = -1$.

13.2. 1) $\cos x = 0$; 2) $\cos x = \frac{1}{2}$;

3) $\cos x = \frac{\sqrt{3}}{2}$; 4) $\cos x = \frac{\sqrt{2}}{2}$;

5) $\cos x = -\frac{1}{2}$; 6) $\cos x = -1$;

7) $\cos 5x = -\frac{1}{\sqrt{2}}$; 8) $\cos \frac{x}{4} = \frac{1}{2}$;

9) $\cos(20^\circ - 5x) = \frac{\sqrt{3}}{2}$; 10) $\cos\left(\frac{3}{2}x - 15^\circ\right) = -1$;

11) $\cos\left(\frac{x}{2} - \frac{\pi}{18}\right) = 1$; 12) $\cos\left(\frac{\pi}{3} - \frac{x}{3}\right) = -\frac{1}{2}$.

13.3. 1) $\operatorname{tg} x = 0$; 2) $\operatorname{tg} x = \sqrt{3}$;

3) $\operatorname{tg} x = 1$; 4) $\operatorname{tg} x = \frac{1}{\sqrt{3}}$;

5) $\operatorname{tg} x = -\sqrt{3}$; 6) $\operatorname{tg} x = -1$;

7) $\operatorname{tg}(2x + 60^\circ) = -1$; 8) $\operatorname{tg}\left(\frac{\pi}{3} - 5x\right) = \sqrt{3}$;

9) $\operatorname{tg}(45^\circ - 3x) = -\frac{\sqrt{3}}{3}$; 10) $\operatorname{tg}\left(\frac{x}{3} - \frac{\pi}{4}\right) = -\sqrt{3}$.