

Equation

1. If $\cot \theta + \tan \theta = 2 \operatorname{cosec} \theta$, then general value of θ is
- (a) $n\pi \pm \frac{\pi}{3}$ (b) $n\pi \pm \frac{\pi}{6}$ (c) $2n\pi \pm \frac{\pi}{3}$ (d) $2n\pi \pm \frac{\pi}{6}$
2. If $1 + \cot \theta = \operatorname{cosec} \theta$, then the general value of θ is
- (a) $n\pi + \frac{\pi}{2}$ (b) $2n\pi - \frac{\pi}{2}$ (c) $2n\pi + \frac{\pi}{2}$ (d) None of these
3. The solution of the equation $\sec \theta - \operatorname{cosec} \theta = \frac{4}{3}$ is
- (a) $\frac{1}{2} \left[n\pi + (-1)^n \sin^{-1} \left(\frac{3}{4} \right) \right]$ (b) $n\pi + (-1)^n \sin^{-1} \left(\frac{3}{4} \right)$ (c) $\frac{n\pi}{2} + (-1)^n \sin^{-1} \left(\frac{3}{4} \right)$ (d) None of these
4. If $4 \sin^4 x + \cos^4 x = 1$, then x equal to
- (a) $n\pi$ (b) $n\pi \pm \sin^{-1} \frac{2}{5}$ (c) $n\pi + \frac{\pi}{6}$ (d) None of these
5. If $\theta = \tan^{-1} (2 \tan^2 \theta) - \frac{1}{2} \sin^{-1} \left(\frac{3 \sin 2\theta}{5 + 4 \cos 2\theta} \right)$ then the general value of θ
- (a) $n\pi$ (b) $n\pi + \frac{\pi}{4}$ (c) $n\pi + \tan^{-1}(-2)$ (d) All of these
6. If $32 \tan^8 \theta = 2 \cos^2 \alpha - 3 \cos \alpha$ and $3 \cos 2\theta = 1$, then the general value of α is
- (a) $2n\pi \pm \frac{\pi}{3}$ (b) $2n\pi \pm \cos^{-1} 2$ (c) $2n\pi \pm \frac{2\pi}{3}$ (d) None of these