

Inverse Trigonometry Function

1. Solve $\cos(\sin^{-1}\frac{1}{2})$
2. Solve $\cot(\cos^{-1}\frac{3}{5})$
3. Solve $\sin^{-1}(\sin\frac{5\pi}{9})$
4. Solve $\cos^{-1}(\cos\frac{10\pi}{7})$
5. Solve $\tan^{-1}(\tan 5)$
6. Solve $\cot^{-1}[\cot(-\frac{1}{2})]$
7. Solve $\tan(5\sin^{-1}\frac{\sqrt{3}}{2})$
8. Solve $\sin(\sin^{-1}\frac{1}{2} + \cos^{-1}\frac{1}{2})$
9. Solve $\tan(\tan^{-1}\frac{5}{6} - \tan^{-1}\frac{3}{8})$
10. Solve $\tan[(\sin^{-1}(-\frac{3}{5}) + \cos^{-1}\frac{1}{3})]$
11. Solve $\cos^{-1}\frac{3}{5} + \cos^{-1}\frac{9}{11}$
12. Solve $2\cot^{-1}\frac{1}{5} + \cot^{-1}\frac{1}{4}$
13. Prove $\sin^{-1}\frac{40}{41} + \cos^{-1}(-\frac{9}{41}) = \pi$
14. Prove $\sin^{-1}\frac{3}{5} - \cos^{-1}\frac{12}{13} = \sin^{-1}\frac{16}{65}$
15. Prove $2\sin^{-1}\frac{3}{5} = \sin^{-1}\frac{24}{25}$
16. Solve $(\tan^{-1}x)^2 = \frac{1}{4}$
17. Solve $\tan^{-1}\sqrt{3} = \cot^{-1}x$
18. Solve $\pi - 4\tan^{-1}(3x + 2) = 0$
19. Solve $\sin^{-1}(-\frac{4}{5}) = -\cos^{-1}x$
20. Solve $\cot^{-1}x + \cot^{-1}(5 - x) = \cot^{-1}1$
21. Solve $\sin^{-1}2x + \sin^{-1}x = \frac{\pi}{3}$
22. Solve $\sin^{-1}x + \cos^{-1}\frac{x}{2} = \frac{5\pi}{6}$
23. Solve $\tan^{-1}4 - \tan^{-1}x = \tan^{-1}2$
24. Solve $\cos(\cos^{-1}\frac{5}{13} + \frac{\pi}{6})$
25. Solve $\cos^{-1}[\cos(-\frac{\pi}{10})]$
26. Solve $\sin(\sin^{-1}\frac{63}{65} + 2\tan^{-1}\frac{1}{5})$
27. Solve $\tan^{-1}3 + \tan^{-1}\frac{1}{2}$
28. Prove $\tan^{-1}3 + \cot^{-1}(-\frac{1}{5}) = \pi - \tan^{-1}\frac{1}{8}$
29. Prove $\cot^{-1}\sqrt{3} + \cot^{-1}(2 + \sqrt{3}) = \frac{\pi}{4}$
30. Solve $3\tan^{-1}(2 - \sqrt{3}) - \tan^{-1}\frac{1}{x} = \tan^{-1}\frac{1}{3}$