

Worksheet: Inverse Trigonometric Functions

Tamil Nadu State Board · Class 12 · Mathematics · 3 questions · 11 marks

Name: _____

Date: _____

Score: _____ / 11

Q1. Find the principal values of: (i) $\sin^{-1}\left(\frac{3}{2}\right)$ (ii) $\cos^{-1}(\cos(7\pi/6))$ (iii) $\tan^{-1}(3)$. [2 marks]

Q2. Prove that $\tan^{-1}\left(\frac{1}{2}\right) + \tan^{-1}\left(\frac{2}{11}\right) = \tan^{-1}\left(\frac{3}{4}\right)$. [3 marks]

Q3. Prove that: $\sin^{-1}\left(\frac{12}{13}\right) + \cos^{-1}\left(\frac{4}{5}\right) + \tan^{-1}\left(\frac{63}{16}\right) = \frac{\pi}{2}$ [6 marks]
