

## Worksheet: Inverse Trigonometric Functions

Madhya Pradesh 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]

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**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]

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**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]

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