INVERSE TRIGONOMETRIC FUNCTIONS

BASIC CONCEPTS OF INVERSE TRIGONOMETRIC FUNCTION

EXERCISE

Q.1 Determine the value of $\sin\left[\frac{\pi}{3} - \sin^{-1}\left(-\frac{1}{2}\right)\right]$

Q.2 Calculate the value of $\text{cosec}[\sec^{-1}(-\sqrt{2}) + \cot^{-1}(-1)]$

Q.3 Identify the domain of $y = \sec^{-1}(x^2 + 3x + 1)$

Q.4 Determine the domain of $y = \cos^{-1}\left(\frac{x^2}{1+x^2}\right)$

Q.5 Find the domain of $y = \tan^{-1}(\sqrt{x^2 - 1})$

ANSWER KEY

1. 1

2. –1

3. $(-\infty, -3] \cup [-2, -1] \cup [0, \infty)$

4. R

5. $(-\infty, -1] \cup [1, \infty)$