

GIRLS' HIGH SCHOOL AND COLLEGE, PRAYAGRAJ

2020 – 2021

CLASS - 12 B & C

SUBJECT: MATHEMATICS

VIDEO ASSIGNMENT NO. 1

LS 3 : INVERSE TRIGONOMETRIC FUNCTION

**INSTRUCTIONS:** 1. The parents to ensure that their ward watches the video instructions for this assignment attentively by clicking on the given link: <https://youtu.be/ndDzbSQR4yU> revise the lesson given in the book and then work on the assignment. The completed assignment is to be submitted to this Email- [jpathakproject@gmail.com](mailto:jpathakproject@gmail.com) .

2. Students who have already completed this assignment need not to send it again.

**Exercise**

1. Find the domain of the following functions.

i.  $\cos^{-1}(5x - 2)$

ii.  $\sec^{-1}(3 - 2x)$

2. Find the principal values of each of the following:

i.  $\sin^{-1}\left(-\frac{1}{2}\right)$

ii.  $\sec^{-1}(-2)$

iii.  $\tan^{-1}(1)$

iv.  $\sec^{-1}(2)$

v.  $\operatorname{cosec}^{-1}(2)$

vi.  $\operatorname{cosec}^{-1}\left(-\frac{2}{\sqrt{3}}\right)$

3. Evaluate :

i.  $\sin^{-1}\left(\frac{\sqrt{3}}{2}\right) + \tan^{-1}(\sqrt{3})$

ii.  $\cos^{-1}\left(\frac{1}{2}\right) + 2 \sin^{-1}\left(\frac{1}{2}\right)$

iii.  $\cos^{-1}\left(-\frac{1}{2}\right) + \tan^{-1}(-\sqrt{3}) - \operatorname{cosec}^{-1}(2)$

4. Draw the graphs of the inverse trigonometric functions.