

Homework Assignment for Week 11

Assigned Nov 24, 2011.

1. Section 6.9: Problems: 9, 13, 21, 23, 31, 33, 39, 43, 57, 61, 67, 71, 79.

2. Show that

$$\frac{d \csc^{-1} y}{dy} = \frac{-1}{|y| \sqrt{y^2 - 1}}, \quad |y| > 1$$

Explain why the negative sign is chosen. You will need to start from the ‘restricted’ domain of \csc to see this.

3. Section 6.10: Problems: 15, 31, 43, 67.

For Section 6.10, skip about the inverse hyperbolic functions and concentrate on hyperbolic functions and calculus related to them.