

# Mathematical Functions using R

- ▶ Powers and Roots

$$x^2, \quad \frac{1}{x^3}, \quad \sqrt{x}, \quad \sqrt[3]{x}$$

- ▶ Logarithms

- 1) Natural Logarithm :  $\text{Log}_e(x)$  also denoted as  $\text{Ln}(x)$
- 2) Logarithms to other bases ,e.g.  $\text{Log}_2(x)$

- ▶ Exponentials

$$e^x$$

- ▶ Absolute Values.

$$|x|$$

# Mathematical Functions using R

## Powers and Roots

► Positive Powers  $x^2$

► Negative Powers

$$\frac{1}{x^n} = x^{-n}$$

► Square Root

$$\sqrt{x} = x^{1/2}$$

► Other Roots

$$\sqrt[n]{x} = x^{1/n}$$