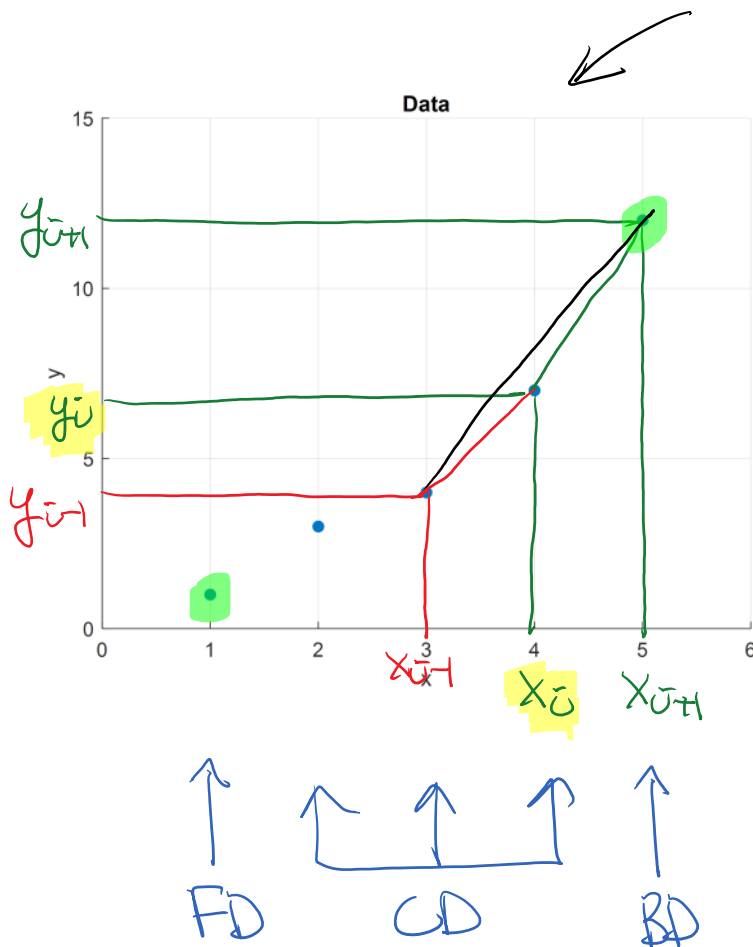# Numerical Differentiation

Saturday, June 20, 2020   10:09 PM

Forward Difference

$$\frac{dy}{dx} = \frac{y_{i+1} - y_i}{x_{i+1} - x_i}$$

Backwards Difference

$$\frac{dy}{dx} = \frac{y_i - y_{i-1}}{x_i - x_{i-1}}$$

Central Difference

$$\frac{dy}{dx} = \frac{y_{i+1} - y_{i-1}}{x_{i+1} - x_{i-1}}$$