

# Lagrangian Interpolation

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## Pseudo-code

1. Input no. of observation, n
2. For i = 1 to n
  - Input  $X_i$
  - Input  $Y_i$
- Next i
3. Input  $X_p$  at which  $Y_p$  to be computed
4. Initialize  $Y_p = 0$
5. For i = 1 to n
  - t=1
  - For j = 1 to n
    - If  $j \neq i$ 
      - $t = t * (X_p - X_j) / (X_i - X_j)$
  - End If
  - Next j
  - $Y_p = Y_p + t * Y_i$
- Next i
6. Print  $Y_p$  as output
7. Stop