## Tutorial

**Newton's forward and backward difference method:**

1. Using Newton's forward interpolation formula, find the polynomial f(x) satisfying the following data. Hence evaluate at f(x) at x = 5.

| x: | 4 | 6 | 8 | 10 |
|------|---|---|---|----|
| f(x) | 1 | 3 | 8 | 10 |

2. From the following data, find θ at x=43 and x=84

| x: | 40 | 50 | 60 | 70 | 80 | 90 |
|----|-----|-----|-----|-----|-----|-----|
| y: | 184 | 204 | 226 | 250 | 276 | 304 |

3. From the given data, find the number of students whose wight is between 60 to to 70.

| Weitht in Ibs | 0-40 | 40-60 | 60-80 | 80-100 | 100-120 |
|----------------|------|-------|-------|--------|---------|
| No. of students | 250 | 120 | 100 | 70 | 50 |