

1. Find the least squares line of the form $y = ax$ for the following data points

(1, 2), (2, 3), (3, 5), (4, 6), (5, 8), (6, 9), (7, 11), (8, 12)

2. Find the polynomial curve fit of degree = 2 for the following data points.

(-4.5, 0.7), (-3.2, 2.3), (-1.4, 3.8), (0.8, 5.0), (2.5, 5.5), (4.1, 5.6)

3. Find the 2nd Newton polynomial approximation for,

$$f(x) = \frac{1}{\sqrt{1-x}}$$

on the interval. [-1.5, 0.95]

4. Find the 2nd Lagrange polynomial approximation for,

$$f(x) = \frac{1}{1+10x^2}$$

on the interval [-1,1].