

數值 HW8 E94116198 劉昇伶

1.
 - a. Polynomial Fit (degree 2) $y = a_2 * x^2 + a_1 * x + a_0$:
 $y = 6.6912x^2 + -1.8837x + 3.0864$
Error = 0.00525
 - b. Exponential Fit $y = b * e^{(a*x)}$:
 $y = 21.4445 * e^{(0.3985x)}$
Error = 94.98302
 - c. Power Fit $y = b * x^n$:
 $y = 6.2390 * x^{2.0196}$
Error = 0.01172
2. $P(x) = -0.232631445x^2 + 0.326548331x + 0.498279307$
3.
 - (b) $\int S_4(x) dx = 0.197672$
 - (c) $\int x^2 \sin(x) dx = 0.223244$
 - (d) Error $E(S_4) = 7.740158e-02$