

1) Following set of temperature measurements taken from the cylinder head. Use “**interp1**” to interpolate a temperature at 2.6s and 4.9s.

Time (Sec.)	Temperature (°F)
0	0
1	20
2	60
3	68
4	77
5	110

2) Use “**polyfit**” to plot the best linear fit for the cylinder head temperature data.

3) Using “**polyval**” illustrate the computation of the best-fit polynomial of degree 2 through degree 5 for the cylinder head temperature data and plot 4 figures separately. Use appropriate titles for the figures.

4) First generate a vector of x points, equally spaced in the interval [0, 2.5]; then evaluate “**erf(x)**” at those points. There are seven coefficients and the polynomial is:

$$0.0084x^6 - 0.0983x^5 + 0.4217x^3 + 0.1471x^2 + 1.106x + 0.0004$$

Evaluate the polynomial at the data points and plot the best-fit polynomial for it.