1. Using the Newton technique, find a quartic polynomial with passes through each of the following points:

x:	–2	0	3	8	15
y:	12	35	39	17	–9

Verify the correctness of your answer by evaluating the resulting polynomial at each x of the previous table. Also, plot the 5 points and your polynomial in the same graph.

2. Using the Lagrange technique, fit a fifth-degree polynomial to the following data:

x:	0.5	1.0	1.5	2.0	2.5	3.0
y:	ln(0.5)	ln(1.0)	ln(1.5)	ln(2.0)	ln(2.5)	ln(3.0)

With the help of Maple, display the difference between this polynomial and the ln(x) function itself in the 0.5 to 3.0 range of x values (also: try the 0.1 to 6.0 range!).

Submit by either sliding it under my door (J410), or by leaving it in my mailbox in the Math main office (J415) - you can do this till midnight of the due day.

Answers must be either ’exact’ (ie. fractions) or, when switching to decimal fromat, they must be quoted to the full 10 digit accuracy.