Curve Fitting

Fitting a straight line

(1). Fit a straight line to the following data.

(x, y) : (1,1), (2,5), (3,11), (4,8), (5,14).

(2) Fit a straight line $y = a + bx$ to the following data.

X:	1	2	3	4	5	6
Y:	49	54	60	73	80	86

(3) Fit a straight line to the following data.

Year(X):	1951	1961	1971	1981	1991
(In tons) Production(Y):	10	12	8	10	15.

Also estimate the production in 1987.

(4) Fit a straight line to the following data with x as independent variable.

X:	1965	1966	1967	1968	1969
Y:	125	140	165	195	200

(5) Fit a straight line to the following data

(x, y) = (-1, -5), (1,1), (2,4), (3,7), (4,10)

Estimate y when x = 7.

Fitting a Parabola

(1) Fit a second degree parabolic curve to the following data.

X:	1	2	3	4	5	6	7	8	9
Y:	2	6	7	8	10	11	11	10	9

(2) Fit a parabola to the following data.

X :	-2	-1	0	1	2
Y :	10	10.8	10.3	20.5	6.3

(3) Fit a second degree parabolic curve to the following data & estimate the production in 1982.

Year (X) :	1974	75	76	77	78	79	80	91
Production (Y) :	12	14	26	42	40	50	52	53.

(4) Fit a parabola to the following data and estimate y when $x = 10$.

x :	1	2	3	4	5	6	7	8	9
y :	2	6	7	8	10	11	11	10	9.