Experiment 4: Linear Regression

X	0	1	2	3	4
Y	2	3	5	4	6

```
disp('*Program to fit a straight line')
x=input('enter the value of x in matrix form:')
y=input('enter the value of y in matrix form:')
n=length(x);
sum(y)
X=(x)
Y=(y)
% first set all values of addition to zero
sumX=0
sumY=0;
sumXY=0;
sumX2=0;
for i=1:n
    sumX=sumX+X(i);
    sumY=sumY+Y(i);
    sumXY=sumXY+X(i)*Y(i);
    sumX2=sumX2+X(i)*X(i);
end
d=[sumX2 sumX;sumX n];
db=[n sumY;sumX sumXY];
b1=det(db)/det(d)
meanX=sumX/n;
meanY=sumY/n;
b0=meanY-(b1*meanX)
```

Problem description: Find the linear regression for the following data.

X	1.5	2.5	3.5	4.5	5.5	6.5	7.5
Y	12	15	7	16	20	10	35