1)

1) Co variance will be Zero.

Let us consider this example:-

Calculate covariance for the following data set:(As the variable as same)

x: a (mean = a)

y: a (mean = a)

Substituting the values into the formula and solve:

Cov(X,Y) = SE((X-µ)(Y-?)) / n-1

=(a-a)(a-a)/(a-1)

= 0

The Pearson correlation coefficient, can take a range of values from +1 to -1.

A value of 0 (as the variable are same) indicates that there is no association between the two variables.

When the value of r(correlation coefficient) is greater than zero, it is a positive relationship; when the valueis less than zero, it is a negative relationship. A value of zero indicates that there is no relationship between the two variables.

2)

the plot will look like (C)

3)

mean=38

variance= 12.4615

standard dev= 3.53008