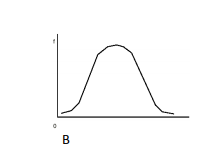
Ans 1. The Covariance between same variable, will be the variance of a variable with itself which is the square of the standard deviation.

The correlation of a variable with itself is always 1 .

Ans 2 . figure B



Ans 3

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **X** | **X-Mean** | **(X-Mean)^2** |  |  |  |
| 32 | -6 | 36 |  |  |  |
| 32 | -6 | 36 |  |  |  |
| 35 | -3 | 9 |  | **Mean** | **38** |
| 36 | -2 | 4 |  | **variance** | **12.4615** |
| 37 | -1 | 1 |  | **SD** | **3.53009** |
| 38 | 0 | 0 |  |  |  |
| 38 | 0 | 0 |  |  |  |
| 39 | 1 | 1 |  |  |  |
| 39 | 1 | 1 |  |  |  |
| 39 | 1 | 1 |  |  |  |
| 40 | 2 | 4 |  |  |  |
| 40 | 2 | 4 |  |  |  |
| 42 | 4 | 16 |  |  |  |
| 45 | 7 | 49 |  |  |  |
| **532** |  | **162** |  |  |  |

Ans 4 . it is a positive relationship .

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Day** | **NYSE(x)** | **NASDAQ(y)** | **xy** | **x^2** | **y^2** |  |  |  |
| 1 | 0.58 | 0.7 | 0.406 | 0.3364 | 0.49 |  |  |  |
| 2 | 0.01 | -0.79 | -0.0079 | 0.0001 | 0.6241 |  | **correlation** |  |
| 3 | 0.43 | 0.85 | 0.3655 | 0.1849 | 0.7225 |  | **coefficient** |  |
| 4 | -0.14 | -0.16 | 0.0224 | 0.0196 | 0.0256 |  | **R** | 0.82787369 |
| 5 | -1.15 | -0.71 | 0.8165 | 1.3225 | 0.5041 |  |  |  |
| 6 | 0.15 | -0.02 | -0.003 | 0.0225 | 0.0004 |  |  |  |
| 7 | -1.23 | -1.1 | 1.353 | 1.5129 | 1.21 |  |  |  |
| 8 | -0.88 | -0.77 | 0.6776 | 0.7744 | 0.5929 |  |  |  |
| 9 | -1.26 | -0.78 | 0.9828 | 1.5876 | 0.6084 |  |  |  |
| 10 | 0.08 | -0.35 | -0.028 | 0.0064 | 0.1225 |  |  |  |
| **total** | **-3.41** | **-3.13** | **4.5849** | **5.7673** | **4.9005** |  |  |  |