Q.6	Using the dataset below, calculate the covariance between X and Y.

X	2	4	6	8
Y	3	7	5	10

ANS.	Covariance	4.75

Q.7	Compute the Pearson correlation coefficient between variables A and B:

A	10	20	30	40	50
B	8	14	18	24	28

ANS.	The Pearson correlation coefficient between variables A and B	0.997608606

Q.8	The following table shows heights (in cm) and weights (in kg) of 5 students. Find the correlation coefficient between Height and Weight.

Height	150	160	165	170	180
Weight	50	55	58	62	70

ANS.	The correlation coefficient between Height and Weight.	0.99218437

Q.10	Two investment portfolios have the following returns (%) over 5 years. Compute the covariance and correlation coefficient, and interpret whether the portfolios move together.

Year	Portfolio A	Portfolio B
1	8	6
2	10	9
3	12	11
4	9	8
5	11	10

ANS.	Covariance	2.4
	correlation	0.986393924