Suppose the following two risky securities are available in the market and you expect one of four possible states of the world in the future period of time. The probability of each state of nature and the associated returns on each stock, A and B are given in the table below:

|  |  |  |  |
| --- | --- | --- | --- |
| State of Nature | Probability | Return on A | Return on B |
| 1 | 0.3 | -5% | 8% |
| 2 | 0.2 | 10% | -1% |
| 3 | 0.2 | 20% | 10% |
| 4 | 0.3 | 2% | 15% |

1. calculate the means and standard deviations of returns for each asset. Calculate the covariance in returns for the two assets.
2. calculate the mean and standard deviation for the following portfolios: 100% in A; 75% in A and 25% in B; 50% in each; 25% in A and 75% in B; and 100% in B.