**[Que-26] - Find the most likely price at Delhi corresponding to the price of Rs. 70 at Agra from the following data: Coefficient of correlation between the prices of the two places +0.8.**

**Finding the Most Likely Price at Delhi Corresponding to Agra's Price of Rs. 70**

To determine the most likely price at Delhi corresponding to the price of Rs. 70 at Agra, given a coefficient of correlation of +0.8 between the two places, we employ the concept of linear regression.

The formula used is:

Y=Yˉ+r⋅(SDX/SDY) ⋅(X−Xˉ)

Here:

* Y represents the price at Delhi.
* X represents the price at Agra, which is Rs. 70 in this case.
* r is the coefficient of correlation, which is +0.8.
* Xˉ and Yˉ are the means of prices at Agra and Delhi, respectively.
* SDX and SDY are the standard deviations of prices at Agra and Delhi, respectively.

Given that we have X=70 and r=0.8, and assuming mean-centered approach (Xˉ=Yˉ=0):

Y=0.8⋅70

Y=56

Therefore, based on a direct proportional relationship with a correlation coefficient of +0.8, the most likely price at Delhi corresponding to the price of Rs. 70 at Agra would be Rs. 56.