

$$\text{Cov}[X] =$$

$$\begin{bmatrix} \sigma_1^2 & \rho\sigma_1\sigma_2 \\ \rho\sigma_1\sigma_2 & \sigma_2^2 \end{bmatrix}$$

$$E[(x_1 - \bar{x}_1)^2]$$

$$E[(x_2 - \bar{x}_2)^2]$$

$$E[(x_i - \bar{x}_i)(x_j - \bar{x}_j)]$$

$$E[(x_1 - \bar{x}_1)^2]$$

X	(1)	(2)	F_2	P_2
100% F_1			0.4	0.5
30% P_1			0.1	0.2

Handwritten table with a diagonal line from the top-left to the bottom-right. The diagonal line separates the top-right and bottom-left quadrants. The top-right quadrant contains the text "500" and "500". The bottom-left quadrant contains the text "400" and "300". The bottom-right quadrant contains the text "0.1" and "0.2". The top-left quadrant contains the text "1" and "2". The bottom-right quadrant contains the text "0.1" and "0.2".

	1	2
500	F_2	P_2
400	F_1	P_1
300	P_1	P_2

Considérons soit les expériences telles que $y = F_2$

$$P(X = F_1 \mid y = F_2) = \frac{0.4}{0.4 + 0.1} = \frac{4}{5} \text{ et}$$