a. Match the symbols/notation with the definitions on the right. Put the letter of the definition in the space next to the symbol on the left.

____ $\Pr(X \in A) = ?$

____ μ

____ r

____ S_{XY}

____ $f_X(x)$

____ $\cup$

____ $(\Omega, \mathcal{F}, P)$

____ $\bar{X}$

____ σ_X^2

____ ρ

____ S_X

____ $F_X(x)$

____ $\cap$

a. set intersection; "AND"

b. set union; "OR"

c. population mean; expected value; 1st moment

d. sample mean

e. population variance, 2nd moment

f. sample standard deviation

g. population correlation coefficient

h. sample correlation coefficient

i. general probability statement

j. sample covariance

k. p.d.f. of X (probability distribution function)

l. c.d.f. of X (cumulative pdf)

m. Probability space

b. Match the symbol/notation with its defining equation on the right.

____ $E(X)$

____ r

____ $\bar{X}$

____ S_{XY}

____ σ_X^2

____ $\hat{X}$

____ S_X^2

____ $F_X(x)$

a. $\Sigma x_i p_i; \int_{-\infty}^{\infty} xf(x)dx$

b. $\dfrac{1}{n-1} \cdot \dfrac{1}{S_X S_Y} \Sigma(X - \bar{X})(Y - \bar{Y})$

c. $\dfrac{1}{n}\sum_{i=1}^{n} X_i$

d. $\dfrac{1}{n-1}\sum_{i=1}^{n}(X_i - \bar{X})(Y_i - \bar{Y})$

e. $E(X - \mu_X)^2$

f. $(\prod_{i=1}^{n} X_i)^{1/n}$

g. $\dfrac{1}{n-1}\sum_{i=1}^{n}(X_i - \bar{X})^2$

h. $\Pr(X \le x)$