

Let X be a random variable with the following PF:

$$f_x(x) = \begin{cases} \frac{x^2}{10} & \text{for } x = -2, -1, 0, 1, 2 \\ 0 & \text{otherwise.} \end{cases}$$

Let Y be a random variable with the following PF:

$$f_y(y) = \begin{cases} 0.1 & y = 0 \\ 0.2 & y = 1 \\ 0.3 & y = 2 \\ 0.4 & y = 3 \\ 0 & \text{otherwise.} \end{cases}$$

Find the following:

1. $E(X)$
2. $E(Y)$
3. $E(X^2)$
4. $E(4X + 3)$
5. $E(3X^2 - 2Y + 1)$