

$$R_X = \{-2, -1, 0, 1, 2\}$$

$$R_Y = \{0, 1, 4, 9\}$$

$$p_Y(0) = p_X(-1) = \frac{1}{8}$$

$$p_Y(1) = p_X(-2) + p_X(0) = \frac{3}{8}$$

$$p_Y(4) = p_X(1) = \frac{1}{4}$$

$$p_Y(9) = p_X(2) = \frac{1}{4}$$

Then the PDF of y is:

$$p_Y(k) = \begin{cases} 1/8 & k = 0 \\ 3/8 & k = 1 \\ 1/4 & k = 4 \\ 1/4 & k = 9 \end{cases}$$