

	1	2	3	4	5	6
1	\	1	2	3	4	5
2	1	\	1	2	3	4
3	2	1	\	1	2	3
4	3	2	1	\	1	2
5	4	3	2	1	\	1
6	5	4	3	2	1	\

$$p_X(1) = \frac{10}{30} = \frac{5}{15}$$

$$p_X(2) = \frac{8}{30} = \frac{4}{15}$$

$$p_X(3) = \frac{6}{30} = \frac{3}{15}$$

$$p_X(4) = \frac{4}{30} = \frac{2}{15}$$

$$p_X(5) = \frac{2}{30} = \frac{1}{15}$$

The PDF of X is:

$$p_X(k) = \begin{cases} 5/15 & k=1 \\ 4/15 & k=2 \\ 3/15 & k=3 \\ 2/15 & k=4 \\ 1/15 & k=5 \end{cases}$$