



Al lançar um dado dos 12 faces  
medem, produzir 36 resultados:

(1,1) (1,2) ... (1,6) (2,1) (2,2) ... (2,6) (3,1) ... (6,6)

Los valores de  $X$  son:

1 2 3 4 5 6  $\rightarrow (X_1=1)$   
2 2 3 4 5 6  $\rightarrow (X_1=2)$   
3 3 3 4 5 6  $\rightarrow (X_1=3)$   
4 4 4 4 5 6  $\rightarrow (X_1=4)$   
5 5 5 5 5 6  $\rightarrow (X_1=5)$   
6 6 6 6 6 6  $\rightarrow (X_1=6)$

ii) Por tanto, la f.u.p. de la v.a.  $X$  son:

$x_i$	1	2	3	4	5	6
$p(x_i)$	$1/36$	$3/36$	$5/36$	$7/36$	$9/36$	$11/36$

la función de distribución de  $X$  son:

$$F(x) = \begin{cases} 0 & k: x < 1 \\ 1/36 & k: 1 \leq x < 2 \\ 4/36 & k: 2 \leq x < 3 \\ 9/36 & k: 3 \leq x < 4 \\ 16/36 & k: 4 \leq x < 5 \\ 25/36 & k: 5 \leq x < 6 \\ 1 & k: x \geq 6 \end{cases}$$

$$2) \mu = E(X) = 1 \cdot \frac{1}{36} + 2 \cdot \frac{3}{36} + 3 \cdot \frac{5}{36} + 4 \cdot \frac{7}{36} + 5 \cdot \frac{9}{36} + 6 \cdot \frac{11}{36} = \frac{16}{3}$$

30)

$Y_i$	2	3	4	5	6
$P(Y_i)$	$\frac{2}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$

40)

$$E[Y^3] = 2^3 \cdot \frac{2}{6} + 3^3 \cdot \frac{1}{6} + 4^3 \cdot \frac{1}{6} + 5^3 \cdot \frac{1}{6} + 6^3 \cdot \frac{1}{6} = \frac{224}{3}$$