

$n=3$ $p=0.6$ $1-p=0.4$ $X \sim b. \text{ dispersia}$

$$P(X=0) = \binom{3}{0} (0.4)^0 (0.6)^3 = \frac{1}{8}$$

$$P(X=1) = \binom{3}{1} (0.4)^1 \cdot (0.6)^2 = 3 \cdot \frac{1}{2} \cdot \frac{1}{2} = \frac{3}{8}$$

$$P(X=2) = \binom{3}{2} (0.6)^2 \cdot (0.4)^1 = 3 \cdot \frac{1}{2} \cdot \frac{1}{2} = \frac{3}{8}$$

$$P(X=3) = \binom{3}{3} (0.6)^3 \cdot (0.4)^0 = \frac{1}{8}$$

$$P(X \geq 1) = P(X=1) + P(X=2) + P(X=3) = \frac{4}{8}$$

$$\Downarrow \\ P(X \geq 1) = 1 - P(X=0) = 1 - \frac{1}{8} = \frac{7}{8}$$

Obțineți puncte, în funcție de numărul de răspunsuri corecte

$$P = \frac{1}{6}$$

$$n=3$$

$$a) P(X=3) = \binom{3}{3} \cdot \left(\frac{1}{6}\right)^3 \cdot \left(\frac{5}{6}\right)^0 = \frac{1}{216}$$

A - 3 răspunsuri corecte
B - corectitudine 1 răspuns
C - corectitudine 0 răspunsuri
D - corectitudine 2 răspunsuri

$$a) P(X \geq 1) = 1 - P(X=0) = \binom{3}{0} \cdot \left(\frac{5}{6}\right)^3 \cdot \left(\frac{1}{6}\right)^0 = 1 - \frac{125}{216}$$

$$= 1 - \frac{125}{216} = \frac{91}{216}$$

$$c) E(X) = np = 3 \cdot \frac{1}{6} = \frac{1}{2}$$

$$V(X) = npq = 3 \cdot \frac{1}{6} \cdot \frac{5}{6} = \frac{5}{12}$$