

$$2) P[0 \text{ TOČKA}] = p_1 = \frac{2}{20} = 0.1$$

Y = OČENA ENE NALOGE

$$P[1 \text{ TOČKA}] = p_2 = \frac{7}{20} = 0.35$$

$$P[2 \text{ TOČKA}] = p_3 = \frac{11}{20} = 0.55$$

ZALOGA UREDNOSTI PO ŠESTIH NALOGAH JE: 0, 1, 2, 3, ..., 11, 12

VERJETNOSTNA FUNKCIJA:

$$P[X=0] = p_1^6 = 0.000001$$

$$P[X=1] = p_1^5 \cdot p_2 \cdot 6 = 0.000021$$

$$P[X=2] = p_1^4 \cdot p_2^2 \cdot \binom{6}{2} + p_1^5 \cdot p_3 \cdot 6 = 0.000217$$

$$P[X=3] = p_1^3 \cdot p_2^3 \cdot \binom{6}{3} + p_1^4 \cdot p_2 \cdot p_3 \cdot \binom{6}{2} \cdot 2 = 0.001435$$

$$P[X=4] = p_1^4 \cdot p_3^2 \cdot \binom{6}{2} + p_1^3 \cdot p_2^2 \cdot p_3 \cdot \binom{6}{3} \cdot \binom{3}{1} + p_1^2 \cdot p_2^4 \cdot \binom{6}{2} = 0.006747$$

$$P[X=5] = p_1 \cdot p_2^5 \cdot \binom{6}{5} + p_1^2 \cdot p_2^3 \cdot p_3 \cdot \binom{6}{3} \cdot \binom{3}{2} = 0.023653$$

$$P[X=6] = p_1 \cdot p_3^5 \cdot \binom{6}{5} + p_1^2 \cdot p_2^2 \cdot p_3^3 \cdot \binom{6}{2} \cdot \binom{4}{2} + p_1 \cdot p_2^4 \cdot p_3 \cdot \binom{6}{4} \cdot \binom{2}{1} + p_2^6 = 0.063277$$

$$P[X=7] = p_1^2 \cdot p_2 \cdot p_3^4 \cdot \binom{6}{2} \cdot \binom{4}{2} + p_1 \cdot p_2^3 \cdot p_3^3 \cdot \binom{6}{3} \cdot \binom{3}{1} + p_2^5 \cdot p_3 \cdot \binom{6}{5} = 0.130089$$

$$P[X=8] = p_1^2 \cdot p_3^4 \cdot \binom{6}{2} + p_1 \cdot p_2^2 \cdot p_3^4 \cdot \binom{6}{2} \cdot \binom{4}{2} + p_2^4 \cdot p_3^2 \cdot \binom{6}{2} = 0.204102$$

$$P[X=9] = p_1 \cdot p_2 \cdot p_3^4 \cdot \binom{6}{2} \cdot \binom{4}{1} + p_2^3 \cdot p_3^3 \cdot \binom{6}{3} = 0.238748$$

$$P[X=10] = p_1 \cdot p_3^5 \cdot \binom{6}{5} + p_2^2 \cdot p_3^4 \cdot \binom{6}{2} = 0.190340$$

$$P[X=11] = p_2 \cdot p_3^5 \cdot \binom{6}{5} = 0.105690$$

$$P[X=12] = p_3^6 = 0.027681$$

$$E[X] = \sum_{x=0}^{12} x \cdot p_X(x) = 6 \cdot E(Y) = 6 \cdot (0 \cdot 0.1 + 1 \cdot 0.35 + 2 \cdot 0.55) = 8.7$$

MEDIANA \tilde{m}_X : $P[X \leq \tilde{m}_X] = 0.5 \Rightarrow P[X \leq 8] = 0.4302$
 $P[X \leq 9] = 0.668$ $\tilde{m}_X \approx 8.7$

STUDENT NI OPRAVIL OBUJETAJOSTI, CE JE DOBIL MAJ KOT 60% .12 = 7.2 TOČK.

$$P[M \text{ OPRAVIL}] = P[X \leq 7] = 0.000001 + 0.000021 + \dots + 0.130089 = 0.225$$