

1) DVA TETRAEDRA;

ZALOGA VREDNOSTI: 2, 3, 4, 5, 6, 7, 8

MOŽNI IZIDI: (1,1), (1,2), (1,3), (1,4)

(2,1), (2,2), (2,3), (2,4)

(3,1), (3,2), (3,3), (3,4)

(4,1), (4,2), (4,3), (4,4)

VERJETNOST
POSAMEZNEGA IZIDA

$$\frac{1}{4} \cdot \frac{1}{4} = \frac{1}{16}$$

$$P[X=2] = \frac{1}{16}$$

$$P[X=3] = \frac{2}{16}$$

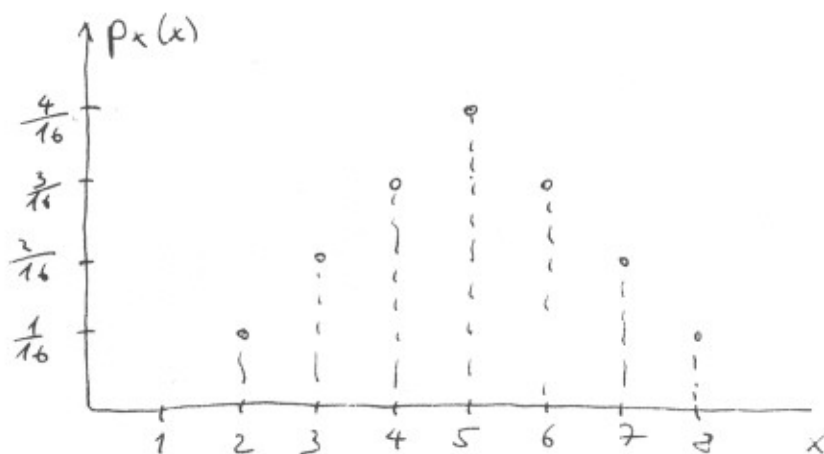
$$P[X=4] = \frac{3}{16}$$

$$P[X=5] = \frac{4}{16}$$

$$P[X=6] = \frac{3}{16}$$

$$P[X=7] = \frac{2}{16}$$

$$P[X=8] = \frac{1}{16}$$



$$E[X] = 5 \quad (\text{ZARADI SIMETRIJE})$$

$$E[X] = \sum_{i=1}^8 x_i \cdot p_X(x_i) = 2 \cdot \frac{1}{16} + 3 \cdot \frac{2}{16} + 4 \cdot \frac{3}{16} + 5 \cdot \frac{4}{16} + 6 \cdot \frac{3}{16} + 7 \cdot \frac{2}{16} + 8 \cdot \frac{1}{16}$$

$$= \frac{1}{16} (2 + 6 + 12 + 20 + 18 + 14 + 8) = \frac{80}{16} = \underline{\underline{5}}$$

$$E[X^2] = \sum_{i=1}^8 x_i^2 \cdot p_X(x_i) = 2^2 \cdot \frac{1}{16} + 3^2 \cdot \frac{2}{16} + 4^2 \cdot \frac{3}{16} + 5^2 \cdot \frac{4}{16} + 6^2 \cdot \frac{3}{16} + 7^2 \cdot \frac{2}{16} + 8^2 \cdot \frac{1}{16}$$

$$= \frac{440}{16} = 27.5$$

$$\text{var}[X] = E[X^2] - E[X]^2 = 27.5 - 5^2 = \underline{\underline{2.5}}$$