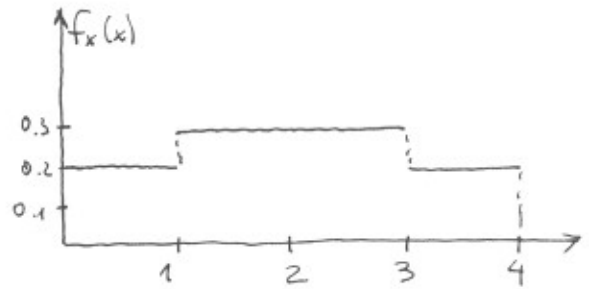


$$1) \quad f_x(x) = \begin{cases} 0.2 & 0 \leq x \leq 1 \\ 0.3 & 1 \leq x \leq 3 \\ 0.2 & 3 \leq x \leq 4 \end{cases}$$



DOLOČITEV $F_x(x)$:

$$\underline{0 \leq x \leq 1}$$

$$F_x(x) = \int_0^x 0.2 d\bar{x} = 0.2x$$

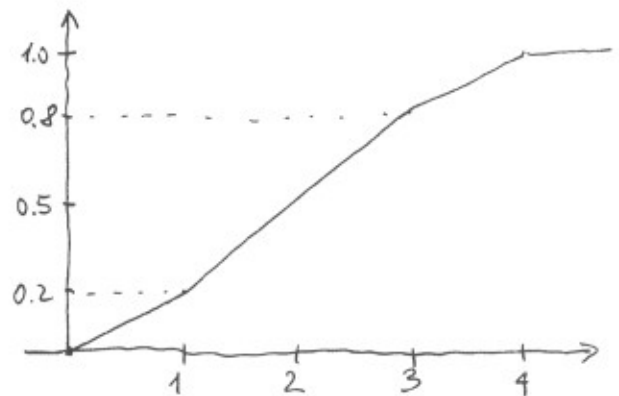
$$\underline{1 \leq x \leq 3}$$

$$F_x(x) = \int_0^1 0.2 d\bar{x} + \int_1^x 0.3 d\bar{x} = 0.2 + 0.3x - 0.3 = 0.3x - 0.1$$

$$\underline{3 \leq x \leq 4}$$

$$F_x(x) = \int_0^1 0.2 d\bar{x} + \int_1^3 0.3 d\bar{x} + \int_3^x 0.2 d\bar{x} = 0.2 + 0.3 \cdot (3-1) + 0.2x - 0.2 \cdot 3$$

$$F_x(x) = 0.2 + 0.2x$$



$$\underline{m_x = 2} \quad (\text{IZ SLIKE, ZARADI SIMETRJE})$$

$$m_x = \int_0^1 x \cdot 0.2 dx + \int_1^3 x \cdot 0.3 dx + \int_3^4 x \cdot 0.2 dx = 0.2 \cdot \frac{1^2}{2} + 0.3 \cdot \frac{3^2 - 1^2}{2} + 0.2 \cdot \frac{4^2 - 3^2}{2}$$

$$m_x = 0.1 + 1.2 + 0.7 = \underline{2.0}$$

$$E[X^2] = \int_0^1 x^2 \cdot 0.2 dx + \int_1^3 x^2 \cdot 0.3 dx + \int_3^4 x^2 \cdot 0.2 dx = 0.2 \cdot \frac{1^3}{3} + 0.3 \cdot \frac{3^3 - 1^3}{3} + 0.2 \cdot \frac{4^3 - 3^3}{3}$$

$$= \frac{0.2 + 0.3 \cdot 26 + 0.2 \cdot 37}{3} = \frac{154}{30} = \frac{77}{15} = 5.133$$

$$\sigma_x^2 = E[X^2] - E[X]^2 = \frac{77}{15} - 2^2 = \frac{17}{15} = 1.133$$

$$\underline{\underline{\sigma_x = 1.065}}$$

$$\underline{\underline{k_{1x} = 0}} \quad (\text{SIMETRJA})$$