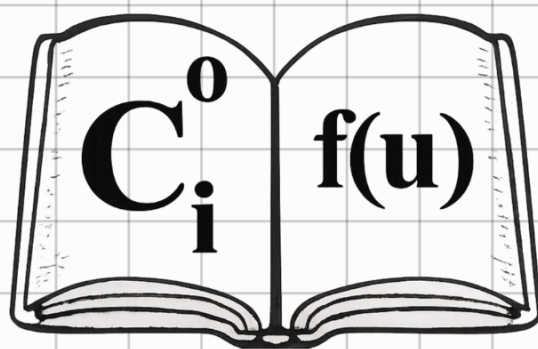




Rezolvare exercițiul zilei #47

Care este al treilea termen al dezvoltării $(1 + \sqrt{2})^5$?

$$T_{k+1} = C_n^k a^{n-k} \cdot b^k$$

$$\downarrow$$
$$k+1=3 \Rightarrow k=2$$

$$a=1$$

$$b=\sqrt{2}$$

$$n=5$$

$$k=2$$

$$T_3 = C_5^2 \cdot 1^{5-2} \cdot \sqrt{2}^2$$

$$C_5^2 = \frac{5!}{2! \cdot 3!} = \frac{\cancel{3!} \cdot 4 \cdot 5}{2! \cdot \cancel{3!}} = 10 \Rightarrow T_3 = 10 \cdot 1 \cdot 2 = 20$$

$$1^{5-2} = 1^3 = 1$$

$$\sqrt{2}^2 = 2$$