

SPECIALNÍ TVAR P. I. E

$$\left| \bigcup_{i=1}^n A_i \right| = \sum_{k=1}^n (-1)^{k+1} \binom{n}{k} M_k$$

$$M_k = \left| \bigcap_{j \in J} A_j \right| \text{ pro } k = |J|$$

$$\left| \bigcup_{i=1}^5 A_i \right| = \sum_{k=1}^5 (-1)^{k+1} \binom{5}{k} (5-k)^k =$$

$$= \binom{5}{1} (5-1)^1 - \binom{5}{2} (5-2)^2 + \binom{5}{3} (5-3)^3 -$$

$$- \binom{5}{4} (5-4)^4 + \binom{5}{5} (5-5)^5 =$$

$$= 5 \cdot 4^1 - 10 \cdot 3^2 + 10 \cdot 2^3 - 5 \cdot 1^4 =$$

$$= 5 \cdot 1684 - 10 \cdot 2187 + 10 \cdot 128 - 5 =$$

$$= 81920 - 21870 + 1280 - 5 =$$

$$= 83200 - 21875 = 61325$$

$$x = 5^5 = 61325 = 78125 - 61325 =$$

$$= 16800$$

$$840.000$$

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$$\left| \bigcup_{i=1}^5 A_i \right| = \sum_{k=1}^5 (-1)^{k+1} \binom{5}{k} (5-k)^7 =$$

$$= \binom{5}{1} (5-1)^7 - \binom{5}{2} (5-2)^7 + \binom{5}{3} (5-3)^7 -$$

$$- \binom{5}{4} (5-4)^7 + \binom{5}{5} (5-5)^7 =$$

$$= 5 \cdot 4^7 - 10 \cdot 3^7 + 10 \cdot 2^7 - 5 \cdot 1^7 =$$

$$= 5 \cdot 16384 - 10 \cdot 2187 + 10 \cdot 128 - 5 =$$

$$= 81920 - 21870 + 1280 - 5 =$$

$$= 83200 - 21875 = 61325$$

$$X = 5^7 - 61325 = 78125 - 61325 =$$

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