Практика 4 ДМ

Одинаковые элементы	порядок	формула
+	+	$\tilde{A}_n^k = n^k$
-	+	$A_n^k = \frac{n!}{(n-k)!}$
+	-	$\tilde{C}_n^k = C_{n+k-1}^k$
-	-	$C_n^k = \frac{n!}{k!(n-k)!}$
+	+	$P(n) = \frac{(\sum n_i)!}{\prod(n_i!)}$
-	+	$P(n) = n!$

№1

$3 \quad 3 \quad 3 \quad 3 \quad 81$

$3 \quad 4 \quad 3 \quad 3 \quad 108 = 333$

$3 \quad 4 \quad 4 \quad 3 \quad 144$

№2

$C_5^0 \cdot C_4^1 + C_5^1 \cdot C_4^2 + C_5^2 \cdot C_4^3 + C_5^3 \cdot C_4^4 = 4 + 30 + 40 + 10 = 84$

№3

$A_5^3 = 5^3 = 125$

№4

$C_7^4 = \frac{7!}{4!3!} = \frac{5 \cdot 6 \cdot 7}{6} = 35 | \cdot 4 = 140$

$C_7^3 = 35$

$140 \cdot 35 \cdot A_3^3 = 29400$

№5

$C_{12}^4 = \frac{12!}{4!8!} = 495$

№6

$C_n^k = 2925$

$\frac{n!}{3!(n-3)!} = 2925$

$n! = 2925 \cdot 3!(n-3)!$

$n \cdot (n-2)(n-1) = 2925 \cdot 6 \implies n = 27$

№7

$A_7^4 = 7 \cdot 6 \cdot 5 \cdot 4 = 840$

$\frac{840}{C_7^4} = 24$

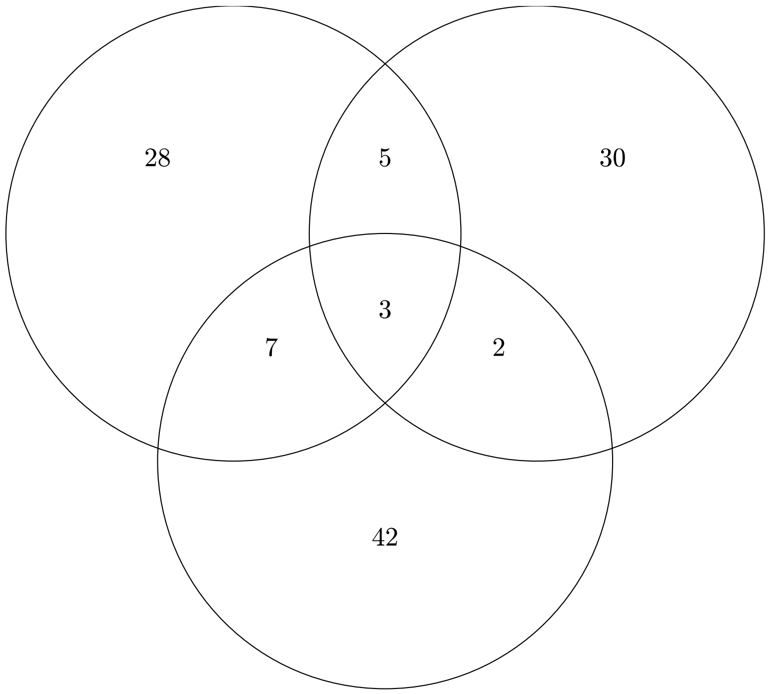
№8

$7 + 5 = 12$

№9

8

№10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