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1. ${}^{10+3}C_3 \cdot {}^{10-4+3}C_3$

$R+W+G+B=10$

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2.

$${}^{2+2}C_2 \times {}^{3+2}C_2 \times {}^{4+2}C_2$$

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3. $^{4+9}C_9$, $^{13}C_9 - {}^{10}C_4$.

4A $\longrightarrow$ $^{10}C_1$.

3A+1D $\longrightarrow$ $^{10}C_1 \, {}^{9}C_1$.

2A+2OA $\longrightarrow$ $^{10}C_2$.

4D $\longrightarrow$ $^{10}C_4$

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4. Find no. of triplets (x, y, z) satisfying the eqn: $x+y+z=30$, $x, y, z \in N$ and $x<y<z$.

1	2	27	
1	1	28	10, 10, 10
			1, 1, 28
			2, 2, 26
			3, 3, 24
			⋮
			14, 14, 2

$$\frac{{}^{30-3+2}C_2 - (13\times 3+1)}{3!}$$

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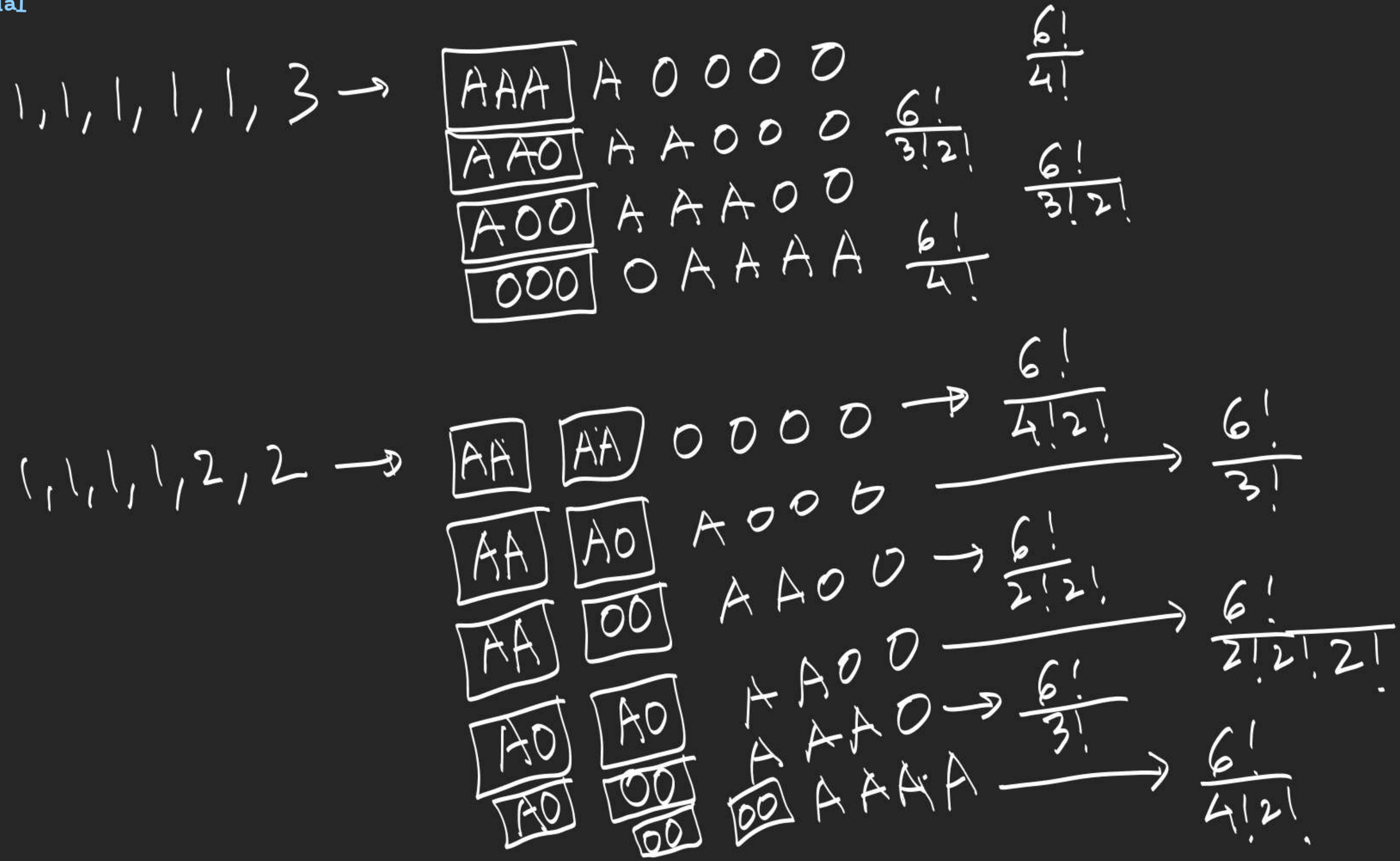

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$$\left({}^{4+5}C_5\right)^2 - \left[\left({}^{4+4}C_4\right)^2 {}^6C_1 - \left({}^{4+3}C_3\right)^2 {}^6C_2 + \dots\right]$$

$C_1\ C_2\ C_3\ C_4\ C_5\ C_6$

A A A A O O

O O

A A A O O O

O A

A A O O O O

DPP - 10 (rem.)