

$$177) A = \{1, 2, 3, 4, 5, 7\} \quad m = 6$$

$$\square\square 2 + \square\square 4 \quad m' = m - 1 = 5 \quad k = 2$$

$$N = 2 \cdot D_{5,2} = 2 \cdot \frac{5!}{3!} = 2 \cdot 5 \cdot 4 = 40$$

$$178) A = \{1, 2, 3, \dots, 12\} \quad \text{"ORDINE"} \quad \text{"NO RIPETIZIONI"}$$

$$k = 3 \quad m = 12$$

$$D_{12,3} = \frac{12!}{9!} = 12 \cdot 11 \cdot 10 = 1320$$

$$179) m = 10 \quad k = 4 \quad \text{"ORDINE"} \quad \text{"NO RIPETIZIONI"}$$

$$D_{10,4} = \frac{10!}{6!} = 10 \cdot 9 \cdot 8 \cdot 7 = 5040$$

$$180) m = 3 \quad k = 5 \quad \text{"ORDINE"} \quad \text{"RIPETIZIONI"}$$

$$D'_{3,5} = 3^5 = 243$$

$$\text{CASSERTI} = \{A, B, C\} \rightarrow \text{AAAAA, AAAAB, \dots, CCCCC}$$

186) $m = 25$ $k = 3$ "ORDINE" "RIPETIZIONI"

$$D'_{25,3} = 25^3 = 15625$$

187) $m = 15$ $k = 2$ "NO ORDINE" "NO RIPETIZIONI"

$$C_{15,2} = \binom{15}{2} = \frac{15!}{13! \cdot 2} = 15 \cdot 7 = 105$$

188) $I_1 = \{A, B\}$ $I_2 = \{4; 0\}$

$$3 \times A + 2 \times B \quad 3 \times 1 + 2 \times 0$$

Combinazione di tre "A" in cinque posti (nei restanti a saranno le "B"). Combinazione semplice (l'ordine non conta). Lo stesso vale per gli "4".

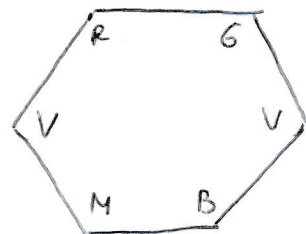
$$N = C_{5,3} \cdot C_{5,3} = \binom{5}{3} \cdot \binom{5}{3} = \left(\frac{5!}{3! \cdot 2} \right)^2 = 100$$

189) $m = 9$ $k = 3$

$$C_{9,3} = \binom{9}{3} = \frac{9!}{6! \cdot 3!} = \frac{9 \cdot 8 \cdot 7}{6} = 84$$

190) $m = 6$ "ROTAZIONE"

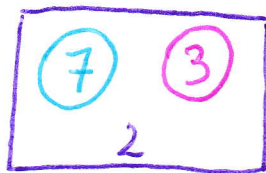
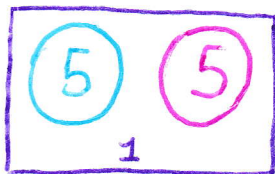
$$\begin{aligned} P_6^{\circ} &= \frac{P_6}{m} = \frac{m!}{m} = (m-1)! = \\ &= 5! = 120 \end{aligned}$$



192) $m = 5$ $k = 8$ "ORDINE" "RIPETIZIONI"

$$D_{5,8}^1 = 5^8 = 390625$$

193)



a) ●● + ●●

"NO ORDINE"

"NO RIPETIZIONI"

$$N = C_{5,2} \cdot C_{7,2} = \frac{5!}{3!2!} \cdot \frac{7!}{5!2!} = 240$$

b) 1r + 1b

"NO ORDINE"

"NO RIPETIZIONI"

$$N = 5 \cdot C_{5,1} \cdot 3 \cdot C_{7,1} = 5 \cdot 5 \cdot 3 \cdot 7 = 525$$

c) ●● + ●●

"NO ORDINE"

"NO RIPETIZIONI"

$$N = C_{5,2} \cdot C_{7,2} = 240$$