

Tarefa Básica - Permutações

01)

$$\text{total} = P_8 = 8!$$

$$8 \cdot 7 \cdot 6 \cdot 5 \cdot 4 \cdot 3 \cdot 2 \cdot 1 = 40\,320$$

$$\text{juntos} = P_7 = 7!$$

$$7 \cdot 6 \cdot 5 \cdot 4 \cdot 3 \cdot 2 \cdot 1 = 5040$$

$$P_2 = 2! = 2 \Rightarrow 5040 \cdot 2 = 10\,080 \quad \left\{ \begin{array}{l} 40\,320 - 10\,080 = 30\,240 \\ \text{total} - \text{juntos} \end{array} \right.$$

$$R: 30\,240$$

$$02) \quad \underset{\text{todas}}{5 \cdot 5 \cdot 4 \cdot 3 \cdot 2 \cdot 1} = P_5 \cdot 5 = 120 \cdot 5 = 600$$

- restaurante

$$R: D$$

03) MORAL

$$P_5 = 5 \cdot 4 \cdot 3 \cdot 2 \cdot 1 = 120 \quad R: A$$

04) MACKENZIE

$$\underset{E^+}{1 \cdot 7 \cdot 6 \cdot 5 \cdot 4 \cdot 3 \cdot 2 \cdot 1} \cdot \underset{E}{1} = 11 P_7 = 5040$$

$$R: C$$

05) LONDRES

$$2 \cdot 5 \cdot 4 \cdot 3 \cdot 2 \cdot 1 \cdot 1 = 24 P_5 = 240$$

$$R: B$$

06) $\underline{4} \cdot \underline{3} \cdot \underline{2} (\underline{1}) \rightarrow 4 \text{ posições}$

$$P_4 = 4! = 24$$

$$P = 24 \cdot 2 = 48 \text{ formas}$$

R: B //

↳ troca entre si

07) $\overset{*}{E} \overset{*}{R} \overset{*}{N} \overset{*}{E} \overset{*}{S} \overset{*}{T} \overset{*}{O}$ 2×6

$$\underline{4} \cdot \underline{3} \cdot \underline{2} \cdot \underline{1} \cdot \underline{3} = \underline{1440} = 720,$$

2

↳ letra repetida R: B //

08) $2 + 3 = 5$

$$\underline{5} \cdot \underline{4} \cdot \underline{3} \cdot \underline{2} \cdot \underline{1} = 120$$

$$\text{homens juntos} = 4! \cdot 2! = 48$$

$$120 - 48 = 72 \text{ com os homens separados, R: B}$$

09) $P_6^{3,2} = \frac{6!}{3! \cdot 2!} = 60,$

↳ repetir a

R: E //

cor da mão