

TAREFA: COMBINAÇÕES

$$\heartsuit 01. P_5 - A_{4,3} = \frac{5!}{4!} - \frac{4 \cdot 3 \cdot 2}{2!} = \frac{120}{24} - \frac{12}{2} = \frac{96}{6} = 16$$

$$02. C_{8,6} = \frac{8 \cdot 7 \cdot 6 \cdot 5 \cdot 4 \cdot 3}{6 \cdot 5 \cdot 4 \cdot 3 \cdot 2 \cdot 1} = \frac{20160}{720} = 28$$

$$03. C_{6,2} \cdot C_{4,3} = \left(\frac{6 \cdot 5}{2!} \right) \cdot \left(\frac{4 \cdot 3 \cdot 2}{3!} \right) = 15 \cdot \left(\frac{24}{6} \right) = 15 \cdot 4 = 60$$

$$04. C_{5,3} = \frac{5 \cdot 4 \cdot 3}{3!} = \frac{60}{6} = 10$$

$$05. C_{6,2} \cdot C_{4,2} = \left(\frac{6 \cdot 5}{2!} \right) \cdot \left(\frac{4 \cdot 3}{2!} \right) = 15 \cdot 6 = 90$$

$$06. C_{4,3} \cdot C_{4,3} \cdot C_{4,3} = \frac{4 \cdot 3 \cdot 2}{3!} = 4$$

$$\downarrow \quad \downarrow \quad \downarrow$$
$$4 \cdot 4 \cdot 4 = 64$$

R: (E)

07.

$$1^a = 4 \cdot C_{5,2} \rightarrow 4 \cdot \left(\frac{5 \cdot 4}{2!} \right) \rightarrow 4 \cdot 10 = 40$$

$$2^a = 4 \text{ jogos} \rightarrow 3^a = 2 \text{ jogos} \rightarrow 4^a = 1 \text{ jogo}$$

$$\text{total: } 40 + 4 + 2 + 1 = 47$$

R: (E)

08. 9 times
3 chaves com 3 times (1 já definido)

$$9 - 3 = 6 \mid 6, 2 = \frac{6 \cdot 5}{2!} = 15$$

$$4, 2 = \frac{4 \cdot 3}{2!} = 6$$

$$2, 2 = \frac{2 \cdot 1}{2!} = 1 \rightarrow 15 \cdot 6 \cdot 3 = 90$$

R: (D)

09.

$$C_{10,1} = 10$$

3 recheios
diferentes

$$C_{10,2} = \frac{10 \cdot 9}{2!} = 45$$

$$10 + 45 + 120 = 175$$

$$C_{10,3} = \frac{10 \cdot 9 \cdot 8}{3!} = 120$$

feitas

$$3 \cdot 175 = 525$$

R: (A)