

# combinações

$$01) \frac{P_5 - A_{4,3}}{C_{4,2}} \quad P_5 = 5! = 5 \cdot 4 \cdot 3 \cdot 2 \cdot 1 = 120 \quad C_{4,2} = \frac{4 \cdot 3}{2 \cdot 1} = 6 \quad \frac{120 - 24}{6} = 16$$

$$02) AC_{8,6} = \frac{8 \cdot 7 \cdot 6 \cdot 5 \cdot 4 \cdot 3}{6 \cdot 5 \cdot 4 \cdot 3 \cdot 2 \cdot 1} = \frac{8 \cdot 7}{2 \cdot 1} = \frac{56}{2} = 28$$

$$03) \frac{4 \cdot 3 \cdot 2 \cdot 6 \cdot 5}{5 \cdot 4 \cdot 3 \cdot 2 \cdot 1} = 6 \cdot 1 = 6 \quad 6 \cdot 10 = 60$$

$$04) C_{5,3} = \frac{5!}{3! \cdot 2!} = \frac{(5 \cdot 4 \cdot 3 \cdot 2 \cdot 1)}{3! \cdot 2!} = \frac{5 \cdot 4}{2!} = \frac{20}{2} = 10$$

$$05) \frac{6 \cdot 5 \cdot 4 \cdot 3}{4 \cdot 3 \cdot 2 \cdot 1} = \frac{6 \cdot 5}{2 \cdot 1} = \frac{30}{2} = 15 \quad 15 \cdot 6 = 90 \text{ resposta letra C}$$

$$06) N = C(4,3)^3 = \frac{4 \cdot 3 \cdot 2}{3 \cdot 2 \cdot 1} = \frac{4}{1} = 4^3 = 4 \cdot 4 \cdot 4 = 64 \text{ resposta letra E}$$

$$07) 10 \cdot 4 = 40 \quad 4 + 2 + 1 = 7 \quad 40 + 7 = 47 \text{ resposta letra E}$$

$$08) 9 - 3 = 6 \quad [C(6,2)]$$

$$[C(4,2)]$$

$$A = \frac{6!}{4! \cdot 2!} = \frac{6 \cdot 5 \cdot 4 \cdot 3}{4 \cdot 3 \cdot 2 \cdot 1} = \frac{6 \cdot 5}{2 \cdot 1} = \frac{30}{2} = 15$$

$$B = \frac{4! \cdot 2!}{2!} = \frac{4 \cdot 3}{2 \cdot 1} = 6$$



$$08) [C(2,2)] = 1$$

$$15 \cdot 6 \cdot 1 = 90 \text{ resposta letra D}$$

$$09) [C(10,1)] = \frac{10!}{1!(10-1)!} = \frac{10!}{9!} = \frac{10 \cdot \cancel{9} \cdot \cancel{8} \cdot \cancel{7} \cdot \cancel{6} \cdot \cancel{5} \cdot \cancel{4} \cdot \cancel{3} \cdot \cancel{2} \cdot \cancel{1}}{\cancel{9} \cdot \cancel{8} \cdot \cancel{7} \cdot \cancel{6} \cdot \cancel{5} \cdot \cancel{4} \cdot \cancel{3} \cdot \cancel{2} \cdot \cancel{1}} = \frac{10}{1} = 10$$

$$[C(10,2)] = \frac{10!}{2!(10-2)!} = \frac{10!}{2!8!} = \frac{10 \cdot 9 \cdot \cancel{8} \cdot \cancel{7} \cdot \cancel{6} \cdot \cancel{5} \cdot \cancel{4} \cdot \cancel{3} \cdot \cancel{2} \cdot \cancel{1}}{\cancel{8} \cdot \cancel{7} \cdot \cancel{6} \cdot \cancel{5} \cdot \cancel{4} \cdot \cancel{3} \cdot \cancel{2} \cdot \cancel{1}} = \frac{10 \cdot 9}{2 \cdot 1} = \frac{90}{2} = 45$$

$$[C(10,3)] = \frac{10!}{3!(10-3)!} = \frac{10!}{3!7!} = \frac{10 \cdot 9 \cdot 8 \cdot \cancel{7} \cdot \cancel{6} \cdot \cancel{5} \cdot \cancel{4} \cdot \cancel{3} \cdot \cancel{2} \cdot \cancel{1}}{\cancel{7} \cdot \cancel{6} \cdot \cancel{5} \cdot \cancel{4} \cdot \cancel{3} \cdot \cancel{2} \cdot \cancel{1}} = \frac{10 \cdot 9 \cdot 8}{3 \cdot 2 \cdot 1} = \frac{720}{6} = 120$$

$$10 + 45 + 120 = 175$$

$$175 \cdot 3 = 525 \text{ resposta letra A}$$