

Combinatórias

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1)

$$C_{4,2} \quad \frac{4 \cdot 3}{2 \cdot 1} \quad 2 \cdot 3 = 6$$

$$A_{4,3} \quad 4 \cdot 3 \cdot 2 = 24$$

$$P_5 \quad \underline{\underline{5 \ 4 \ 3 \ 2 \ 1}} \quad 120$$

$$\frac{120 - 24}{6} \quad 20 - 4 = \underline{\underline{16}}$$

2)

$$C_{8,6}$$

$$\underline{\underline{8 \ 7 \ 6 \ 5 \ 4 \ 3}} \\ 6 \ 5 \ 4 \ 3 \ 2 \ 1$$

$$\frac{8 \cdot 7}{2} \quad \frac{56}{2} = 28$$

28

3)

C₄₃

$$\begin{array}{r} \cancel{4} \cancel{3} \cancel{2} \\ \hline \cancel{3} \cancel{2} \cancel{2} \end{array}$$

4

C₆₂

$$\begin{array}{r} \cancel{6} \cancel{5} \\ \hline \cancel{2} \cancel{1} \end{array}$$

15

$$4.15 = \textcircled{60}$$

4)

C₅₃

$$\begin{array}{r} \cancel{5} \cancel{4} \cancel{3} \\ \hline \cancel{3} \cancel{2} \cancel{1} \end{array}$$

$$\frac{20}{2} = \textcircled{10}$$

5)

C₆₂

$$\begin{array}{r} \cancel{6} \cancel{5} \\ \hline \cancel{2} \cancel{1} \end{array}$$

15

C₄₂

$$\begin{array}{r} \cancel{4} \cancel{3} \\ \hline \cancel{2} \cancel{1} \end{array}$$

6

$$15 \cdot 6 = 90 \quad \textcircled{c}$$

6) C₄₃

$$\begin{array}{r} 432 \\ \times 2 \\ \hline 864 \end{array}$$

M 4

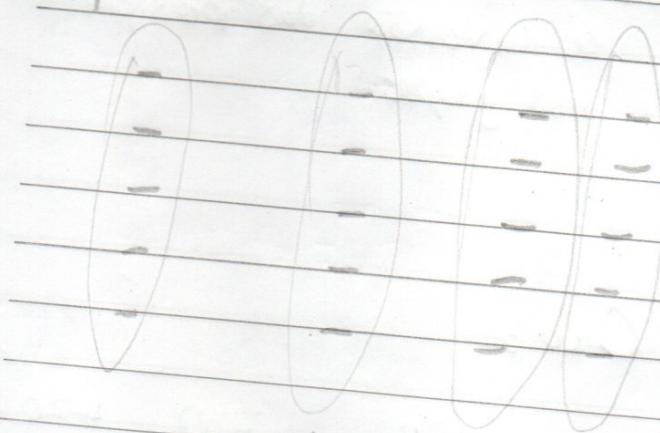
1 4

6 4 =

$$43 = 64$$

(E)

7)



$$\begin{array}{r} 54 \\ \times 2 \\ \hline 108 \end{array}$$

1^a 10 jogos por grupo total: 40

2^a fase $\frac{8}{2} \times \frac{1}{2} = \frac{4}{2} = 4$ jogos

$$\text{semi-final} \quad \frac{2}{2} \times \frac{1}{2} = \frac{1}{2}$$

$$\text{final} \quad \frac{1}{2} \times \frac{1}{2} = \frac{1}{2}$$

total 47 (E)

8) C_{62}

$$\frac{6 \cdot 5}{2 \cdot 1} = 15$$

$$\begin{array}{ccc} A & B & C \\ \frac{7}{?} & \frac{1}{?} & \frac{7}{?} \\ ? & ? & ? \end{array}$$

$$\text{cada grupo } 15 \cdot 3 = 45$$

$$45 + 45$$

45 possibilidades considerando
a inversão das posições
nos grupos

(D)

$$90$$

9) C_{32}

C_{103}

$$3$$

$$\frac{10 \ 9 \ 8}{3 \ 2 \ 1}$$

$$\frac{720}{6} = 120$$

C_{102}

$$\frac{10 \ 9}{2 \ 1} = 45$$

$C_{101} = 10$

$$(120 + 45 + 10) \cdot 3 = 525$$

(A)