

Combinatóes

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1)

$C_{4,2}$

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

$$2 \cdot 3 = 6$$

$A_{4,3}$

$$4 \cdot 3 \cdot 2$$

$$= 24$$

$P_5$

$$5 \cdot 4 \cdot 3 \cdot 2 \cdot 1$$

$$120$$

$$\frac{120 - 24}{6}$$

$$20 - 4 = 16$$

2)

$C_{8,6}$

$$\begin{array}{r} 8 \cdot 7 \cdot 6 \cdot 5 \cdot 4 \cdot 3 \\ 6 \cdot 5 \cdot 4 \cdot 3 \cdot 2 \cdot 1 \end{array}$$

$$\frac{8 \cdot 7}{2}$$

$$\frac{56}{2} = 28$$

$$28$$

3)

C43

C62

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

4

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

15

$$4 \cdot 15 = 60$$

4)

C53

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

$$\begin{array}{r} 20 \\ 2 \end{array} = 10$$

5)

C62

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

15

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

6

$$15 \cdot 6 = 90 \quad (C)$$



6)  $C_{43}$

$$\begin{array}{r} 432 \\ 321 \end{array}$$

M 4

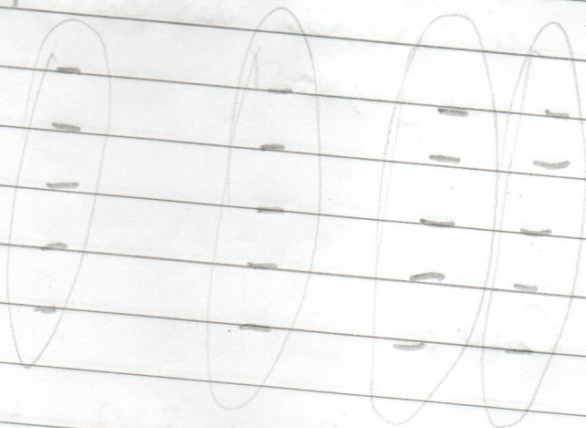
1 4

6 4 =

$$4^3 = 64$$

(E)

7)



$$\begin{array}{r} 54 \\ 2 \end{array}$$

1ª 10 jogos por grupo total: 40

2ª fase

8x

4x

4x

4x

4 jogos

semi final

2x

2x

2

final

1x

1

total 47

(E)

8)  $C_{62}$

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

15

A	B	C
$\frac{7}{7}$	$\frac{7}{7}$	$\frac{7}{7}$
$\frac{7}{7}$	$\frac{7}{7}$	$\frac{7}{7}$

cada grupo  $15 \cdot 3 = 45$

45 possibilidades considerando a inversão das posições nos grupos

$$45 + 45$$

(D)

90

9)  $C_{31}$

$C_{103}$

3

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

$$\frac{720}{6}$$

120

$C_{102}$

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

$C_{101} = 10$

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

(A)