



INSTITUTO FEDERAL

São Paulo

Câmpus Cubatão

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SALA: 317

MATEMATICA

SEMANA 13

① 2 Cubes $\rightarrow 3! \cdot 3! \rightarrow 3!^2 = 36$
 $R: (E)$

②

$$\begin{array}{r} \frac{9}{9} \cdot \frac{8}{8} = \frac{0}{72} \\ \frac{8}{8} \cdot \frac{8}{8} = \frac{5}{64} \end{array} \quad \left. \vphantom{\begin{array}{r} \frac{9}{9} \cdot \frac{8}{8} \\ \frac{8}{8} \cdot \frac{8}{8} \end{array}} \right\} = 136$$

$R: (A)$

③

$\{2, 3, 4, 6, 7\}$

$$\begin{array}{r} 30000 - \frac{4}{1} \cdot \frac{4}{4} \cdot \frac{3}{3} \cdot \frac{2}{2} \cdot \frac{3}{3} = 24 + \\ 30000 - \frac{6}{1} \cdot \frac{3}{3} \cdot \frac{3}{3} \cdot \frac{2}{2} \cdot \frac{3}{3} = 38 + \\ 30000 - \frac{3}{1} \cdot \frac{4}{4} \cdot \frac{3}{3} \cdot \frac{2}{2} \cdot \frac{3}{3} = 24 + \end{array} \quad \left. \vphantom{\begin{array}{r} 30000 - \frac{4}{1} \cdot \frac{4}{4} \cdot \frac{3}{3} \cdot \frac{2}{2} \cdot \frac{3}{3} \\ 30000 - \frac{6}{1} \cdot \frac{3}{3} \cdot \frac{3}{3} \cdot \frac{2}{2} \cdot \frac{3}{3} \\ 30000 - \frac{3}{1} \cdot \frac{4}{4} \cdot \frac{3}{3} \cdot \frac{2}{2} \cdot \frac{3}{3} \end{array}} \right\} = 66$$

$R: (B)$

④

$\{0, 1, 2, 3, 4, 5, 7, 8, 9\}$

$$\begin{array}{r} \frac{6}{1} \cdot \frac{7}{1} \cdot \frac{8}{8} \cdot \frac{7}{7} \cdot \frac{6}{6} = 336 \\ \frac{6}{1} \cdot \frac{7}{8} \cdot \frac{7}{1} \cdot \frac{7}{7} \cdot \frac{6}{6} = 336 \\ \frac{6}{1} \cdot \frac{7}{8} \cdot \frac{7}{7} \cdot \frac{7}{1} \cdot \frac{6}{6} = 336 \\ \frac{6}{1} \cdot \frac{7}{8} \cdot \frac{7}{7} \cdot \frac{7}{6} \cdot \frac{6}{1} = 336 \end{array} \quad \left. \vphantom{\begin{array}{r} \frac{6}{1} \cdot \frac{7}{1} \cdot \frac{8}{8} \cdot \frac{7}{7} \cdot \frac{6}{6} \\ \frac{6}{1} \cdot \frac{7}{8} \cdot \frac{7}{1} \cdot \frac{7}{7} \cdot \frac{6}{6} \\ \frac{6}{1} \cdot \frac{7}{8} \cdot \frac{7}{7} \cdot \frac{7}{1} \cdot \frac{6}{6} \\ \frac{6}{1} \cdot \frac{7}{8} \cdot \frac{7}{7} \cdot \frac{7}{6} \cdot \frac{6}{1} \end{array}} \right\} = 1344$$

$R: (B)$

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DOM	SEG	TER	QUA	QUI	SEX	SÁB
DOM	LUN	MAR	MIE	JUE	VI	SÁB
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⑤

900 máscaras / 3 { Amarela
Azul
Vermelha
3 3 caixas

$$A_{30-3} = \frac{30!}{(30-3)!} = \frac{30!}{27!} = \frac{30 \cdot 29 \cdot 28 \cdot 27!}{27!} = 24360$$

R: 24360