

TAREFA BÁSICA - FATORIAL

DSTOASS

$$\textcircled{1} \quad \text{(A)} \quad 4! = 4 \cdot 3 \cdot 2 \cdot 1 \\ 4! = 4 \cdot 6 \\ 4! = 24$$

$$\text{(B)} \quad 5! = 6! \\ 720 - 720 \\ - 600 \\ 5! = 120$$

$$6! = 6 \cdot 5! = 720 \\ 6! = 6 \cdot 120 = 720 \\ 6! = 720$$

$$\textcircled{2} \quad \frac{9!}{6!} \\ \frac{9}{\cancel{V}} \\ 9! = 9 \cdot 8 \cdot 7 \cdot 720 \\ 9! = 9 \cdot 8 \cdot 5040 \\ 9! = 9 \cdot 40320 \\ 9! = 362880 \\ \underline{362880} = 504 \\ \underline{720}$$

$$\textcircled{3} \quad \frac{98!}{100!} \\ \downarrow \\ \frac{98!}{100 \cdot 99 \cdot 98!} = \frac{1}{100 \cdot 99} = \frac{1}{9900}$$

DSTOOGS

$$\textcircled{2} \quad \frac{1}{N!} - \frac{N}{(N+1)!} \Rightarrow \frac{1-N}{N! (N+1)!} \Rightarrow \frac{1-(N+1)}{N! (N+1)!}$$

$$\frac{1}{N!(N+1)} \Rightarrow \frac{1}{(N+1)!}$$

$$\textcircled{3} \quad \frac{(N!)^2 - (N-1)! N!}{(N-1)! N!} \Rightarrow \frac{N! (N! - (N-1)!)!}{(N-1)! N!} \Rightarrow \frac{N! + (N-1)!}{(N-1)!}$$

$$\frac{N! N-1! - (N-1)!}{(N-1)!} \Rightarrow \frac{N-1! (N-1)}{N-1!} = N-1$$

ALTERNATIVA(A)

$$\textcircled{4} \quad \frac{(N+2)! (N-2)!}{(N+1)! (N-1)!} = 4$$

↓ ↓
 $4! = 4 \cdot 3 \cdot 2 \cdot 1$
 $4! = 24$

$$\frac{(2+2)! (2-2)!}{(2+1)! (2-1)!} = 4$$

↓

SOMENTE UMA SOLUÇÃO CO
TENDO UM NÚMERO PAR PO

$$N! (N+1)!$$

$$N! (N+1)N!$$

$$N! (N+1)$$

$$\frac{1}{N!(N+1)} + \frac{1}{(N+1)!}$$

$$\textcircled{3} \quad \frac{(N!)^2 - (N-1)!N!}{(N-1)!N!} = \frac{N![(N! - (N-1)!)!]}{(N-1)!N!} = \frac{N! - (N-1)!}{(N-1)!}$$

$$\frac{N \cdot N-1! - (N-1)!}{(N-1)!} = \frac{N-1! (N-1)}{N-1!} = N-1$$

ALTERNATIVA(A)

$$\textcircled{4} \quad \frac{(N+2)!(N-2)!}{(N+1)!(N-1)!} = 4$$

$$\downarrow \qquad \qquad 4! = 4 \cdot 3 \cdot 2 \cdot 1$$

$$4! = 24$$

$$\frac{(N+2)!(N-2)!}{(N+1)!(N-1)!} = 4$$

$$\downarrow \qquad \qquad (N+2)!(N-2)! = 4$$

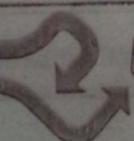
$$\frac{9! \cdot 7}{3! \cdot 1} = 4$$

$$\downarrow$$

$$24 = 4$$

$$6$$

SOMENTE UMA SOLUÇÃO CON-
TENDO UM NÚMERO PAR PODE
SATISFAZER ESSA QUESTÃO, LOGO
ALTERNATIVA(A)



MÁXIMA
CADERNOS

$$\textcircled{5} \quad \frac{(N+1)! - N!}{(N+1)!} = \frac{7}{N+1} \Rightarrow \frac{(N+1) \cdot N! - N!}{(N+1) \cdot N} = \frac{7}{N+1}$$

$$\frac{N!(N+1-1)}{N!(N+1)} = \frac{7}{N+1} \Rightarrow \frac{N}{N+1} = \frac{7}{N+1} \quad \text{ALTERNATIVA (D)}$$

$$\textcircled{6} \quad (N-1)! [(N+1)! - N!]$$

$$(N-1)! (N+1 \cdot N! - N!)$$

$$(N-1)! \cdot N! (N+1-1)$$

$$(N-1)! \cdot N \cdot N!$$

$$[(N-1)! \cdot N] \cdot N!$$

$$\frac{N! \cdot N!}{(N!)^2}$$

ALTERNATIVA (D)

$$\textcircled{7} \quad \frac{N! + (N-1)!}{(N+1)! - N!} = \frac{6}{25}$$

$$\frac{N \cdot (N-1)! + (N-1)!}{N! (N+1) - N!} = \frac{6}{25}$$

$$\frac{N(N-1)! + (N-1)!}{N! (N+1-1)} = \frac{6}{25}$$

$$\frac{N(N-1)! + (N-1)!}{N \cdot N \cdot (N-1)!} = \frac{6}{25}$$

$$\frac{N + (N-1)!}{N \cdot N} = \frac{6}{25} \quad \begin{aligned} N \cdot N &= 25 \\ N^2 &= 25 \\ N &= \sqrt{25} \end{aligned}$$

ALTERNATIVA (C) $N = 5$

$$\textcircled{8} \quad 27! - 22!$$

$$\begin{array}{r} 999 \\ 000,0 \\ - 221 \\ \hline 9779 \end{array}$$

ALTERNATIVA
(D)

DEZENA