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CP 1890964  
TURMA 348

1-  $(1+2x)^6$  (LINHA 6 DE PASCAL) (COEF.  $x^8$ )

$$1 \cdot 1^6 \cdot (2x^2)^0 + 6 \cdot 1^5 \cdot (2x^2)^1 + 15 \cdot 1^4 \cdot (2x^2)^2 + 20 \cdot 1^3 \cdot (2x^2)^3 + 15 \cdot 1^2 \cdot (2x^2)^4 + 6 \cdot 1^1 \cdot (2x^2)^5 + 1 \cdot 1^0 \cdot (2x^2)^6$$

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$$1 + 6 \cdot (2x^2)^1 + 15 \cdot (2x^2)^2 + 20 \cdot (2x^2)^3 + 15 \cdot (2x^2)^4$$

↓ ↓ ↓ ↓ ↓

$$1 + 6 \cdot (2x^2)^1 + 15 \cdot (2x^2)^2 + 20 \cdot (2x^2)^3 + 15 \cdot (2x^2)^4$$

$$\underbrace{6 \cdot 2x^2}_{12x^2} \quad \underbrace{15 \cdot 4x^4}_{60x^4} \quad \underbrace{20 \cdot 8x^6}_{160x^6} \quad \underbrace{15 \cdot 16x^8}_{240x^8}$$

$$1 + 12x^2 + 60x^4 + 160x^6 + \boxed{240x^8} \text{ (LÉTRA C')}$$

11. (SOMA DE COEF.S)

$$(14x - 13y)^{237}$$

$$14 - 13$$

$$1 \rightarrow 1^{237} : \boxed{1xy} \text{ (LÉTRA "B")}$$



$$III. (x+a)^{11} \rightarrow (x^5 + a^6)^{11-5} = 1386 x^5$$

$$\binom{11}{6} = \frac{11!}{6!(11-6)!} = \frac{11 \cdot 10 \cdot 9 \cdot 8 \cdot 7!}{6! \cdot 5!} = \frac{55440}{120} = 462$$

$$462 \cdot a^6 = 1386 x^5$$

$$a^6 = 1386 / 462$$

$$a^6 = 3x^5$$

$$x = \sqrt[6]{3} \text{ (LETRA "A")}$$

$$V - \left( x + \frac{1}{x^2} \right)^N \rightarrow \left( x + 1x^{-2} \right)^N$$

$$\binom{N}{K} x^{N-K} \cdot (1x^{-2})^K \rightarrow \binom{N}{K} x^{N-K} \cdot x^{-2K}$$

$$N - K + (-2K) = 0$$

$$N = K + 2K$$

$$N = 3K$$

$$\boxed{K = N/3} \text{ (Letra "C")}$$