data • •

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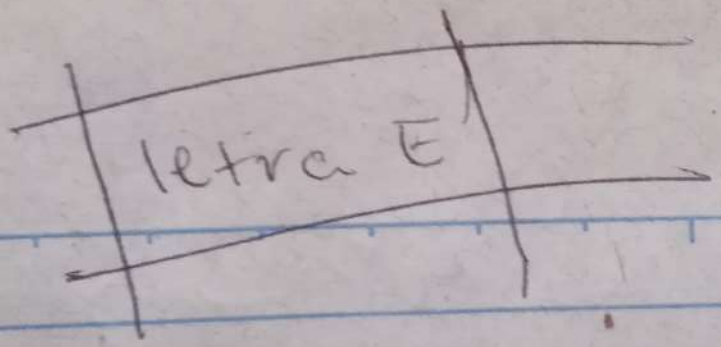
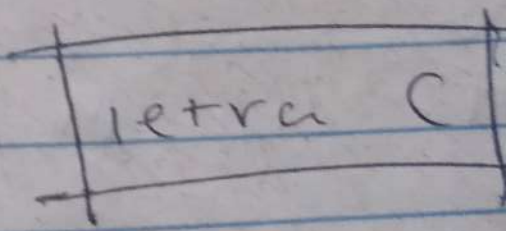


$K = 720$

7) $(2x + y)^5$; $x = 1$, $y = 1$

$(2 + 1)^5 \rightarrow 3^5 = 243$



data

2) $x=1, y=1$

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

$(14-13)^{237} = 1^{237} = 1$

letra B

3) $(x+a)^{11} = 1386x^5$

linha 11: $\binom{11}{K} x^{11-K} \cdot a^K = 1386x^5$

$11-K=5 \rightarrow 11-5=K \rightarrow 6=K$

$\binom{11}{6} x^{11-6} \cdot a^6 = 1386x^5 \rightarrow \frac{11.10.9.8.7.6}{6.5.4.3.2.1} \cdot x^5 \cdot a^6 = 1386x^5$

$\frac{55440a^6}{120} = 1386 \rightarrow 462a^6 = 1386$

$a^6 = 1386/462$

$a^6 = 3 = \sqrt[6]{3} = a$

letra A

4) $(x+1/x^0)^9 \rightarrow (x+x^{-2})^9$

linha 9: $\binom{9}{K} 1^{9-K} (x^{-2})^9 = x^0$

$9-K-2K=0 \rightarrow 9=3K \rightarrow 9/3=K=3$, ou, $\binom{9}{3}$

letra D

5) $(x+1/x^2)^N \rightarrow (x+x^{-2})^N$

linha N: $\binom{N}{K} x^{N-K} \cdot (x^{-2})^K = x^0$

$N-K-2K=0 \rightarrow N=3K \rightarrow N/3=K$

letra C

6) $K = (3x^3+2/x^2)^5 - (243x^{15}+810x^{10}+1080x^5+240/x^5+32/x^{10})$

$(3x^3+2x^{-2})^5 = \binom{5}{0}(3x^3)^5(2x^{-2})^0 + \binom{5}{1}(3x^3)^4(2x^{-2})^1 + \binom{5}{2}(3x^3)^3(2x^{-2})^2 +$

$\binom{5}{3}(3x^3)^2(2x^{-2})^3 + \binom{5}{4}(3x^3)^1(2x^{-2})^4 + \binom{5}{5}(3x^3)^0(2x^{-2})^5 \rightarrow$

$243x^{15}+810x^{10}+1080x^5+720+240/x^5+32/x^{10}$

$K = 243x^{15}+810x^{10}+1080x^5+720+240/x^5+32/x^{10} - (243x^{15}+810x^{10}+1080x^5+240/x^5+32/x^{10})$

Tarefa básica

1) $(1 + 2x^2)^6$

linha 6: $\binom{6}{K} 1^{6-K} (2x^2)^K = x^8$

$\binom{6}{K} 1^{6-K} \cdot 2^K \cdot x^{2K} = x^8$

$2K = 8 \rightarrow K = 8/2 = 4 = K$

$\binom{6}{4} 1^{6-4} \cdot 2^4 \cdot x^{2.4} \rightarrow \frac{6.5.4.3}{4.3.2.1} \cdot 1^2 \cdot 16 \cdot x^8$

$30/2 \cdot 16x^8 \rightarrow 15 \cdot 16x^8$

$15 \cdot 16x^8 = 240x^8$

letra C