

DATE 2024 .11

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NO 三校教 110

永中鍾定翔

ex. 6 calc

三校教作 82

Def)  $A = 2x^3 - x^2 - 3x + 11$ ,  $B = -2x^3 + x - 1$ ,  $C = 2x^3 - 4x^6 - x^2 + 7x$

1)  $A+B$

$$\begin{aligned}
 &= (2x^3 - x^2 - 3x + 11) + (-2x^3 + x - 1) \\
 &= \cancel{2x^3} - x^2 - 3x + 11 - \cancel{2x^3} + x - 1 \\
 &= -x^2 - 2x + 10 \#
 \end{aligned}$$

2)  $A-C$

$$\begin{aligned}
 &= (2x^3 - x^2 - 3x + 11) - (2x^3 - 4x^6 - x^2 + 7x) \\
 &= \cancel{2x^3} - x^2 - 3x + 11 - \cancel{2x^3} + 4x^6 + x^2 - 7x \\
 &= 4x^6 - 10x + 11 \#
 \end{aligned}$$

3)  $A \times B$

$$\begin{aligned}
 &= (2x^3 - x^2 - 3x + 11)(-2x^3 + x - 1) \\
 &= -4x^6 + 2x^4 - 2x^3 + 2x^5 - x^3 + x^2 - 6x^4 + 3x^2 - 3x \\
 &\quad - 22x^3 + 11x - 11 \\
 &= -4x^6 + 2x^5 - 4x^4 - 25x^3 + 4x^2 + 8x - 11 \#
 \end{aligned}$$

4)  $B^2 + C$

$$\begin{aligned}
 &= (-2x^3 + x - 1)(-2x^3 + x - 1) + (2x^3 - 4x^6 - x^2 + 7x) \\
 &= (4x^6 - 2x^4 + 2x^3 - 2x^4 + x^2 - x + 2x^3 - x + 1) + (2x^3 - 4x^6 - x^2 + 7x) \\
 &= \cancel{4x^6} - 4x^4 + 4x^3 + x^2 - 2x + 1 + 2x^3 - \cancel{4x^6} - x^2 + 7x \\
 &= -4x^4 + 6x^3 + 5x + 1 \#
 \end{aligned}$$