$$
\begin{array}{l|l}
2x^5-4x^4+3x^3-x^2+2x-1 & x-3 \\
\hline
2x^5-6x^4 & 2x^4 \\
\hline
\quad 2x^4+3x^3 & +2x^3 \\
\quad 2x^4-6x^3 & +9x^2 \\
\hline
\qquad 9x^3-x^2 & +26x \\
\qquad 9x^3-27x^2 & +80 \\
\hline
\qquad\quad 26x^2+2x & \\
\qquad\quad 26x^2-78x & \\
\hline
\qquad\qquad 80x-1 & \\
\qquad\qquad 80x-240 & \\
\hline
\qquad\qquad\quad 239 &
\end{array}
$$

	x^5	x^4	x^3	x^2	x^1	x^0
	2	−4	3	−1	2	−1
3		6	6	27	78	240
	x^4	x^3	x^2	x^1	x^0	
	2	2	9	26	80	239

reste

$$2x^5-4x^4+3x^3-x^2+2x-1 = (x-3)(2x^4+2x^3+9x^2+26x+80) + 239$$

le quotient

le reste

$$x^5 - 1 \;\Big|\; \underline{x+2 = x-(-2)}$$

Schéma de Horner

	x^5	x^4	x^3	x^2	x^1	x^0
	1	0	0	0	0	−1
−2		−2	4	−8	16	−32
	1^{x^4}	-2^{x^3}	4^{x^2}	-8^{x^1}	16^{x^0}	reste −33

$$\Rightarrow \quad x^5 - 1 = (x+2)(x^4 - 2x^3 + 4x^2 - 8x + 16) - 33$$

$$X^7+1 \quad \Big| \; X+1$$

$$X+1 = X-(-1)$$

2

	1	0	0	0	0	0	0	1
−1		−1	1	−1	1	−1	1	−1
	1	−1	1	−1	1	−1	1	0

reste

$$X^7+1 = (X+1)(X^6-X^5+X^4-X^3+X^2-X+1) + 0$$

Dans ce cas, c'est de la factorisation.