

CALCULUS

Polynomials and rational functions

OLD2

0030-1. Yes or No (no partial credit).

OLD2

Is $3x^2 + 4x - 3$ a polynomial in x ?

0030-2. No partial credit.

OLD2

What is the quadratic coefficient in $4x^5 + 2x^3 - 3x^2 + x + 7$?

0030-3. No partial credit.

OLD2

What is the cubic coefficient in $4x^5 + 2x^3 - 3x^2 + x + 7$?

0030-4. No partial credit.

OLD2

What is the leading coefficient in $4x^5 + 2x^3 - 3x^2 + x + 7$?

0030-5. No partial credit.

OLD2

What is the linear term in $4x^5 + 2x^3 - 3x^2 + x + 7$?

0030-6. Find an equation of the line
through $(1, 7)$ and $(6, -3)$.

0030-7. Divide $2x^3 + x^2 - x + 5$ by $x + 2$.
Show both the quotient and the remainder.

0030-8. Compute $[2x^3 + x^2 - x + 5]_{x \rightarrow -2}$.

0030-9. What is the multiplicity of $x = 1$ as a
root of $3x^5 - 5x^4 - x^3 + 4x^2 - 1$?

WARNING: Note that this polynomial has
no linear term.