# CALCULUS
## Polynomials and rational functions
NEW

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

Is $x\sqrt{2}$ a polynomial in $x$?

NEW 0030-2. No partial credit.

What is the quadratic coefficient in $x^5 - 4x^3 + 8x - 7$?

NEW 0030-3. No partial credit.

What is the cubic coefficient in $(\cos 1)x^5 + \pi x^3 + 4x^2 + x - 8$?

NEW 0030-4. No partial credit.

What is the leading coefficient in $\sqrt{3}x^5 + 2x^3 - 3x^2 + x + \pi$?

NEW 0030-5. No partial credit.

What is the linear term in $2x^5 + 8x^3 + 6x^2 - 4x - 7$?

NEW 0030-6. Find an equation of the line through $(1, 7)$ and $(6, -8)$.

NEW 0030-7. Divide $2t^3 - 9t^2 + 5t - 1$ by $t - 4$. Show both the quotient and the remainder.

NEW 0030-8. Compute $[2t^3 - 9t^2 + 5t - 1]_{t:\to 4}$.

NEW 0030-9. What is the multiplicity of $t = -1$ as a root of $2t^5 + 15t^4 + 40t^3 + 50t^2 + 30t + 7$?