

Do each of the following parts with the polynomials $f(x) = 2x^5 - x^4 - 3x^3 + 18x^2 + 27$ and $g(x) = -9x^{100} - x^2 + 1$.

(a) Write the leading coefficient.

(b) List all of the (nonzero) terms. Below each term, write the coefficient by itself.

(c) What is the coefficient of x^4 in each polynomial? Of x^2 ?

Without using a calculator, calculate $P(0.1)$ for the following polynomials:

(a) $P(x) = 2 + 7x + 9x^2 + 8x^3 + 6x^6$

(b) $P(x) = 18 + 2x^2 + 2x^3 + 2x^4$

(c) $P(x) = 7x + 5x^2 + x^3$

For each of the following decimal numbers, write a polynomial $P(x)$ such that $P(0.1)$ equals your number.

(a) 5.3734

(b) 0.003627

(c) 2843.3294