Writing terms in descending order

The terms of a polynomial in one variable are usually arranged by the highest degree to the lowest degree when read from left to right. For example $5x^3 - 6x^2 + 3x - 6$ is written in descending order.

Example 2: Determine whether the algebraic expression is a polynomial. For those that are polynomials, determine the degree and leading coefficient.

	Polynomial (yes or no)	Degree	Leading Coefficient
a. $-3x^3 + 7x^2 - x + 5$	_____	_____	_____
b. $5z^{-1} + 3$	_____	_____	_____
c. $5p^3q - 8pq^2 + pq$	_____	_____	_____

Classification of Polynomials

- A ***monomial*** is a polynomial with exactly *one term*.
- A ***binomial*** is a polynomial with exactly *two terms*.
- A ***trinomial*** is a polynomial with exactly *three terms*.

Example 3: State whether the expression is or is not a polynomial. If the expression is a polynomial, state its degree, its classification as a monomial, binomial, or trinomial, and its leading coefficient.

	Polynomial (yes or no)	Degree	It is a mono, bi, or tri?	Leading Coefficient
a. 9	_____	_____	_____	_____
b. $x^4 + 8x^3 - y^2$	_____	_____	_____	_____
c. $x^2 + y^2 - \frac{1}{y}$	_____	_____	_____	_____
d. $8m - 4m^{1/2}$	_____	_____	_____	_____