

9.1 Polynomials!

Monomials - a #, variable or a combo of both.

Ex. 17 , $23x^3$, a^4b , y , $-47.3x^5y^10z^7$

Not: $5+x$, $\frac{2}{n}$, 6^y , z^{-4}

\uparrow 2 monomials
 \uparrow Can't have variable in bottom of fraction
 no variable in exponent
 can't have neg exponent

Polynomial - Sum/difference 2 or more Monomials

many

Degree - Sum of exponents in a monomial

Monomial	degree
$4x^2$	2
$3xy^3$	$1+3=4$
$5x^2yz^4$	$2+1+4=7$

Parts of a polynomial:

Degree $\rightarrow 3$

$2x^3 + x^2 - 5x + 12$
 \uparrow leading Coefficient
 \uparrow Constant term

* Degree is highest power of all monomials

* Standard form. Exponents go from high to low

Stuff	mono/poly	degree	Standard form
9	mono	0	Yup ... already in it
$2x^2 + x - 5$	Polynomial (3 terms)	2	Yup ... already in it
$6n^4 - 8n^3$	Not polynomial Variable in exponent		
$n^{-2} - 3$	Not - has negative exponent		
$7b^3c + 4b^4c$	Polynomial (2 terms)	5	$4b^4c + 7b^3c$
$2x^2y^2 - 8xy$ $-2h^2 + 2h^4 - h^6$ $9m^5$			