

Polynomials

{vocab}

- standard form: high degree \rightarrow low degree
- degree: the biggest exponent
- leading coefficient: # attached to highest degree
- constant: just the #, degree is 0

ex 1 $-7x + 8 - 4x^2 + 3x^3$

SF: $3x^3 - 4x^2 - 7x + 8$

4 terms
D: 3
LC: 3

{operations}

1. $(x^2 + 7x - 2) + (2x^2 - 9 + 3x)$

$3x^2 + 10x - 11$

2. $x(3x - 5) - 2(4x^2 - 10x)$

$3x^2 - 5x - 8x^2 + 20x$
 $= -5x^2 + 15x$

3. $3x^3(2x^2 - 5x + 9)$

$6x^5 - 15x^4 + 27x^3$

{multiplying}

First
Outside
Inside
Last

1. $(x-5)(x+3)$

$x^2 - 5x + 3x - 15$
 $= x^2 - 2x - 15$

2. $(2x-7)(3x-1)$

$6x^2 - 21x - 2x + 7$
 $= 6x^2 - 23x + 7$

3. $(3x+2)^2 = (3x+2)(3x+2)$

$9x^2 + 6x + 6x + 4$
 $= 9x^2 + 12x + 4$