VARIABLE = SINGLE LETTER

TERM = A NUMBER, A NUMBER TIMES A VARIABLE(S) OR A VARIABLE(S) TIMES A VARIABLE(S)

ex: 7
$8X$
X^2
$3X^3y^4$

COEFFICIENT = NUMBER BEFORE THE VARIABLES

ex: $8X$ COEFF = 8
$-2X^2y^3$ COEFF = -2
X COEFF: 1
8 COEFF: 8

MONOMIAL = 1 TERM
BINOMIAL = 2 TERMS
TRINOMIAL = 3 TERMS
POLYNOMIAL = 1 OR MORE TERMS

ex: $3X+1$ — BINOMIAL

POLYNOMIALS CANNOT HAVE

1. NEG. EXPONENTS
2. FRACTIONAL EXPONENTS
3. VARIABLES IN DENOMINATOR

DEGREE

LARGEST POWER of X

ex: X^4-X^3+7X-2
DEG = 4

STANDARD FORM

TERMS ARE WRITTEN FROM LARGEST POWER DOWN TO SMALLEST POWER

1. $7x^5$ — 7, 5
2. $-x^2y^4$ — -1, 6
3. $3x^{-4}-x+2$ — NEG. EXP.
4. $\frac{x^5-3}{x}$ — VAR. IN DENOM.
5. $4x^3-7x+2$ — YES; $4x^3-7x+2$; 3; TRINOMIAL
6. $\frac{3}{x^2}$ — NO
7. $7x-x^{\frac{1}{2}}$ — NO
8. 5 — YES; 5; 0; MONOMIAL
9. $2+3x+4x^3-x^2$ — YES; $4x^3-x^2+3x+2$; 3; POLYNOMIAL
10. $x+x^{-5}$ — NO

11. $(x^2-5x+2)+(7x^2-8x+3)$
$= x^2-5x+2+7x^2-8x+3$
$= x^2+7x^2-5x-8x+2+3$
$= 8x^2-13x+5$

12. $(x^2y^3-2xy+11)-(-4x^2y^3-6xy+4)$
$x^2y^3-2xy+11+4x^2y^3+6xy-4$
$5x^2y^3+4xy+7$

$x^2+3xy+y^2$ $\quad$ $y^2+3xy+x^2$