

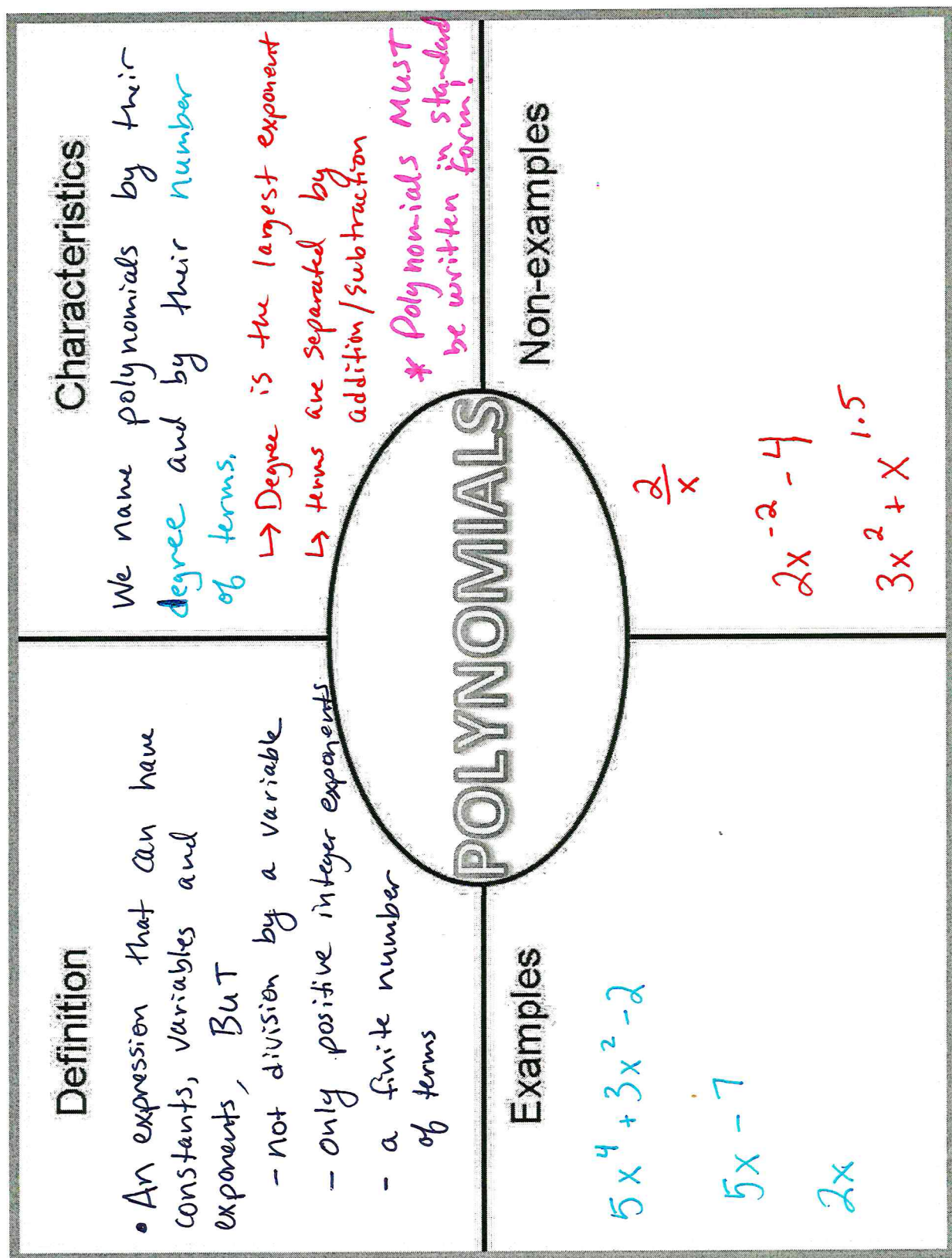
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Classifying Polynomials NOTES



Polynomials are named according to their degree and number of terms.

Name Using "Degree"

Degree	Name	Example
0	constant	6
1	linear	$x+3$
2	quadratic	$3x^2$
3	cubic	$2x^3-5x^2+6$
4	quartic	x^4+3x^2
5	quintic	$-2x^5+3x^2-7$
6	6 th Degree	x^6-7x^5+x

Name by Number of Terms

Terms	Name	Example
1	monomial	$7x^5$
2	binomial	$7x^5+2x$
3	trinomial	$4x^2+3x+5$
4	polynomial w/ 4 terms	$3x^3+2x^2+x-4$

Standard Form of a Polynomial: A polynomial is in standard form when it is written in order from highest degree to lowest degree (remember, degree refers to the exponent!)

Practice: Write the following polynomials in *standard form* and then classify them by both their *degrees* and *number of terms*.

1) $-7 - 3n^2 = -3n^2 - 7$ Degree = 2 # of terms: 2 Quadratic Binomial

2) $5 = 5$ Degree = 0 # of terms: 1 constant monomial

3) $3x^2 - 11 - x^4 = -x^4 + 3x^2 - 11$ Degree = 4 # of terms: 3 Quartic Trinomial

4) $3x^2 - 4x^3 + x + 7x^3 + 3 = 3x^3 + 3x^2 + x + 3$ Degree = 3 # of terms: 4 Cubic Polynomial with 4 terms