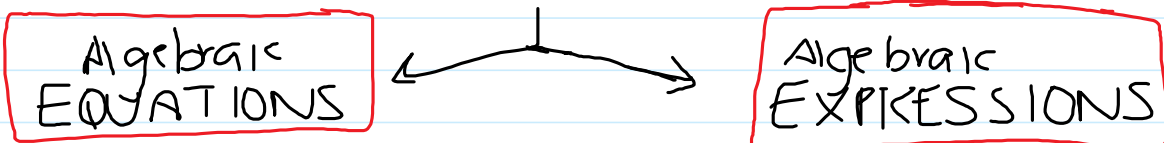


Chapter #5 Introduction of Polynomials

October 7, 2015 1:31 PM

5.1 Language of Mathematics

Algebra . a branch of math that uses symbols to represent unknown numbers / quantities



- phrases with an "equal" sign

- phrases that do not have equal signs
- can have different # of terms

term - a number, variable (letter) or a product of numbers and variables
- are separated by addition or subtraction

Ex #1 How many terms?

$$\underline{y} + \underline{7}$$

2 terms

$$\underline{x^2} - \underline{2x} + \underline{3}$$

3 terms

$$\underline{-1}$$

1 term

$$\underline{2} + \underline{-9} + \underline{+3} - \underline{+^2}$$

4 terms

$$\underline{2x^2y^5z^7}$$

1 term

monomial	a	1 term expression
binomial	a	2 term expression
trinomial	a	3 term expression
<u>Polynomial</u>	2 or more terms	# connected by an addition or subtraction

↓
"many"

Ex #2 classify each expression

$x - 2y$
binomial
polynomial

$-17x^2y^2z^2$
monomial

$4x$
monomial

$2x^2 - 5 + 16xy$
trinomial
polynomial

$x + y - 2 + 5z$
polynomial

Degree of a term sum of the exponents

* the degree of a monomial is the sum of the exponents of its variables (letters)

Ex #3

$2x^1$
degree 1

$-3x^2y^3z^1$
add!!
degree 6

-7
no variable
∴ degree = 0

* the degree of a polynomial is the highest sum of the exponents in any 1 term

Ex #4

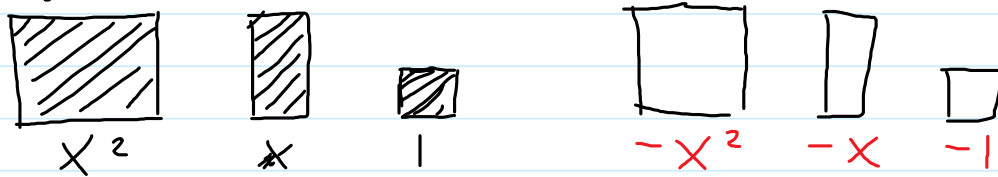
$4x^2 - 3x^1 + 5$
↓ ↓ ↓
2 1 0
degree 2

$3y^1 - 2y^3 + 2y^2$
↓ ↓ ↓
1 3 2
degree 3

$4x^6 + 2x^3y^4$
add!!
↓ ↓
6 7
degree 7

$25x^3y^1 + 36x^2y^1$
↓ ↓ ↓
4 3
degree 4

Algebra Tiles



Ex #5 Model each polynomial using Algebra tiles

(a) $x^2 - 2x + 3$ (b) $-x^2 - 2$



pg 179 # 5-14, 17-21, 24, 26, 28