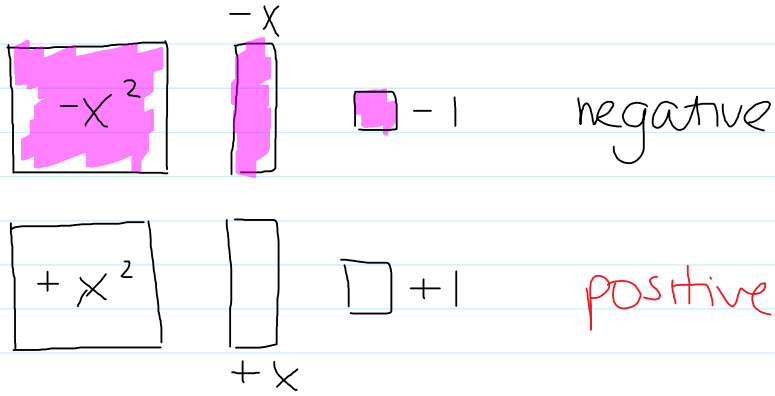
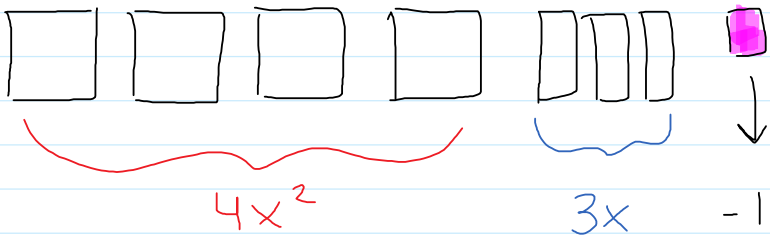
5.1 Modelling Polynomials

May 6, 2015 10:04 AM



Ex. #1



These tiles represent the expression:

$$4x^2 + 3x - 1$$

Algebraic Expressions
- have no equal signs
- can have different # of terms

term - a number, a variable, or a product of numbers and variables
* are separated by add or subtract

Ex. #2

$y + 7$ — 2 terms

$x^2 - 2x + 3$ — 3 terms

-1 — 1 term

$2t - 9 - t^3 - t^2$ — 4 terms

$2t^2y^5z^7$

1 term

monomial a 1 term expression

binomial : a 2 term expression

trinomial : a 3 term expression

polynomial - an expression with 2 or more terms
- connected by addition or subtraction

Ex #3 Classify each expression

(a) $x-2y$
- binomial
- polynomial

(b) $-17x^2y^2z^2$
- monomial

(c) $4x$
monomial

(d) $2x^2 - 5x + 16xy$
trinomial
polynomial

(e) $x+y-2+5z$
polynomial

Degree

- the degree of a term is the sum of the exponents

Ex #4

(a) $2x^1$
degree. 1

(b.) $-3x^{2}y^{3}z^{1}$
$\Rightarrow 6$

(c) -7
no variables (letter)
$\Rightarrow 0$
no degree

The degree of a polynomial is the highest exponent in any 1 term

Ex. #5

(a) $4x^{2} - 3x^{1} + 5$

(b) $3y^{1} - 2y^{3} + 2y^{2}$

(a) $4x^{2} - 3x^{1} + 5$

2 1 0

degree 2

(b) $3y^{1} - 2y^{3} + 2y^{2}$

1 3 2

degree: 3

(c) $4x^{6} + 2x^{3}y^{4}$

6 7

degree: 7

(d) $25x^{3}y^{1} + 3x^{2}y^{1}$

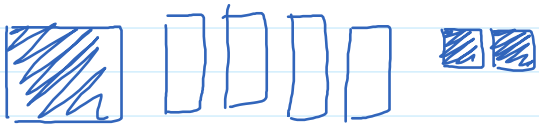
4 3

degree: 4

Draw tiles for the following.

(a) $-2b^{2} + 3b$

(b) $-c^{2} + 4c - 2$



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