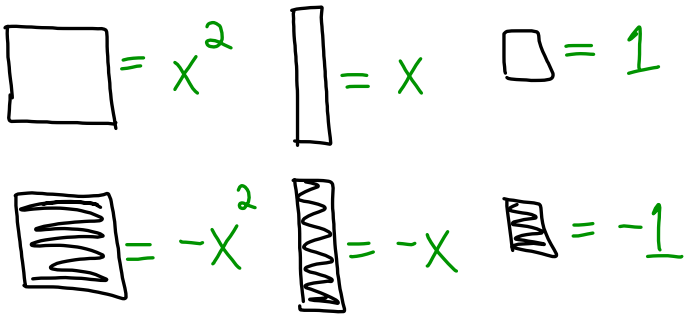
Chapter 5 - Polynomials

Section 5.1 - Modelling Polynomials

not shaded = + (yellow)
Shaded = − (red)



a term, such as 3x, has a coefficient of 3 and a variable x.

3x
↙ coefficient ↘ variable

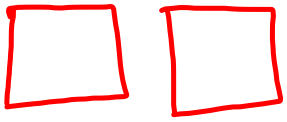
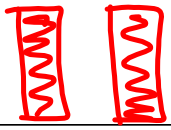
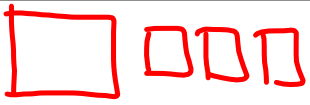
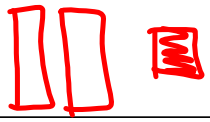
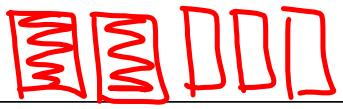
* an algebraic expression such as 3x is also called a POLYNOMIAL.

* there are many types of polynomials:
  - ⇒ monomial = one term = 3x
  - ⇒ binomial = two terms = 3x + 2
  - ⇒ trinomial = three terms = $4x^2 + 3x + 2$

* the degree of a polynomial tells you the greatest exponent of any term:

ex: $4x^{2} + 3x + 2$ ⇒ degree 2

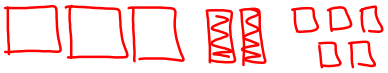
ex: $3x^{1} + 2$ ⇒ degree 1

Type	# of terms	Example	model	Degree
monomial	1	$2x^2$		2
monomial	1	$-2n$		1
monomial	1	4		0
binomial	2	x^2+3		2
binomial	2	$2a-1$		1
binomial	2	$-2b^2+3b$		2
trinomial	3	$-c^2+4c-2$		2

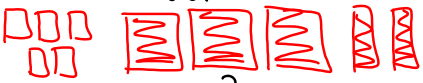
Examples:

① Which of these polynomials can be represented by the same algebra tiles?

a) $3s^2 - 2s + 5$



b) $5 - 3a^2 - 2a$



c) $-2c + 5 - 3c^2$

So b and c model the same

Example②: Which polynomial does each collection of algebra tiles represent?

a)  -6

b)  $4x^2 - 3x + 2$

c) 

$-3 - 2x^2 + x$

or $-2x^2 + x - 3$ I like this one the best !!!!!

or $x - 3 - 2x^2$

*note: An algebraic expression that contains a term with a variable in the denominator such as $\frac{5}{n}$, or the square root of a variable such as $\sqrt{n}$, is NOT a polynomial

$3x^2 + \sqrt{x} - 1$ $2 + \frac{5}{p}$

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