What's Going On?

Checking In

Minds on Variables, Coefficients and Terms **OH MY**

Action! Degree

Consolidation Like and Unlike Terms

Learning Goal - I will be able to communicate with algebra!

Integer Quiz

You can use a calculator.
Please write in pencil.

Checking In

Taking Notes

In this class, you are expected to take your own notes.

Minds on

Variables, Coefficients and Terms OH MY

Thurs
~~Yester~~day I gave you some homework problems that used some new language:

- **polynomial expression**
- **variable**
- **coefficient**
- **term**

Let's take a look at one of these questions and see what these terms are all about!

Minds on

term polynomial expression

coefficient variable

11. Meridith has a summer job at a fitness club. She earns a $5 bonus for each student membership and a $7 bonus for each adult membership she sells.

a) Write a **polynomial expression** that describes Meridith's total bonus.

Let s represent the number of student memberships that Meridith sells.

Let a represent the number of adult memberships that Meridith sells.

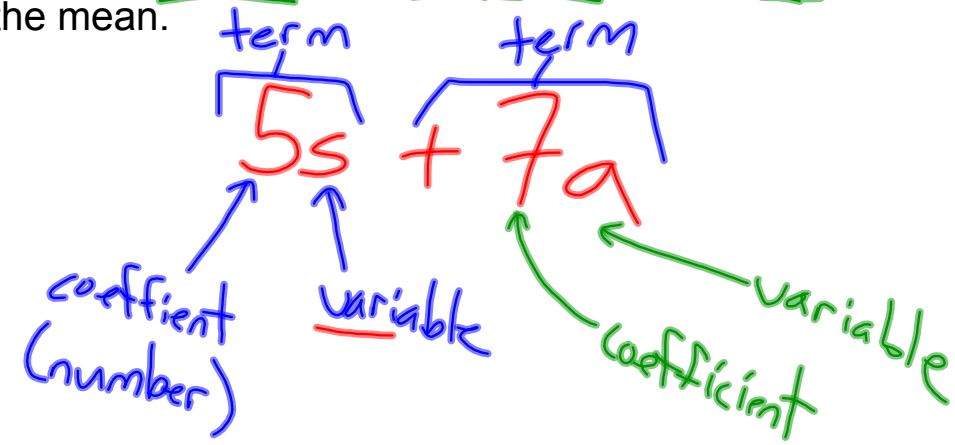
$5s + 7a$

this is the same (5 times s) essss

Minds on

11. Meridith has a summer job at a fitness club. She earns a $5 bonus for each student membership and a $7 bonus for each adult membership she sells.

b) Identify the **variable** and **coefficient** of each term and explain what the mean.



Minds on

11. Meridith has a summer job at a fitness club. She earns a $5 bonus for each student membership and a $7 bonus for each adult membership she sells.

c) How much will Meredith's bonus be if she sells 12 student memberships and 10 adult memberships?

$5s + 7a$

$= 5(12) + 7(10)$

$= 60 + 70$

$= 130$

∴ Meridith's bonus is $130.

Minds on

What's a Polynomial?

Polynomial - an algebraic expression consisting of one or more terms (combination of coefficients and/or variables) connected by addition and subtraction.

Minds on

Variables, Coefficients and Terms OH MY

In the **term** (-8x) we have a **variable** and we have a **coefficient**.

The **variable** is X

The **coefficient** is -8

Minds on

Variables, Coefficients and Terms OH MY

In the **term** $-3.5n^2$ we have a **variable** and we have a **coefficient**.

The **variable** is n^2

The **coefficient** is -3.5

Minds on

Variables, Coefficients and Terms OH MY

In the **term** g^4

The **variable** is g^4

The **coefficient** is 1

When we have a term with "no" coefficient we know the coefficient is in fact 1!!

In the term $-3.5x^2y$

variable: x^2y^1

coefficient: -3.5

In the term -125

variable: no variable!

coefficient: -125

-125 is a constant term

a term with no variable

Action!

What's a Polynomial?

Polynomials are further broken into *monomials, binomials, trinomials,* and *polynomials*:

n-termed

monomials	binomials	trinomials
a, $2x$, $-4k^2$, 8, 0	$2c-4$, a^2b^3-3, $mn+o$	$3g^3-2h^4+5$, $-7r^4+5s^3-6t^7$

$4xy$

$-8a^2b^2c^3$

A polynomial with one term.

$x+y$

$-15p-32q$

A polynomial with two terms.

$x+y+z$

$a+b-3$

$2p-3q+5r$

A polynomial with three terms.

Action!

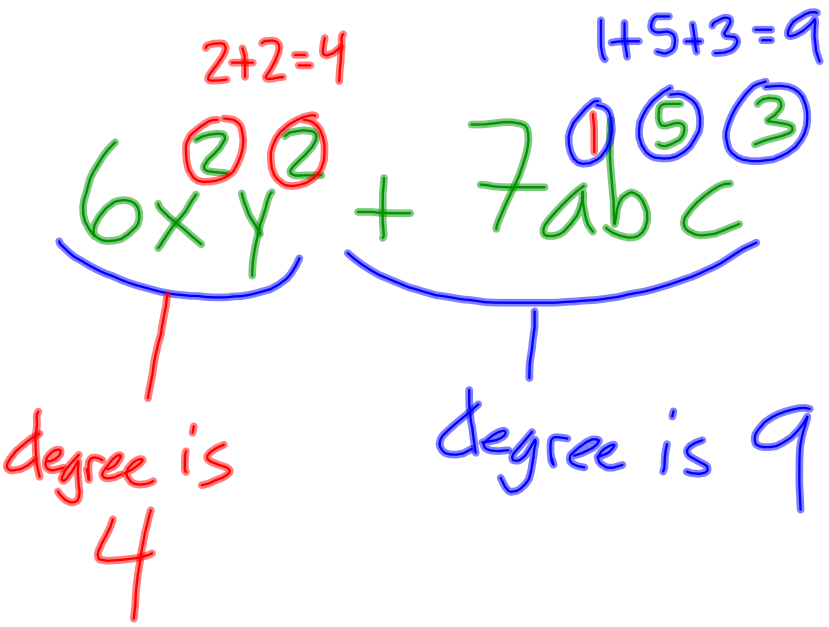
What's a Polynomial?

Polynomials are also classified by degree:

polynomial	degree
$2x - 4y^2$	2
$2a^4 - 4b^3$	4
$-5j^9 + 6k - 4l^3$	9
72	0
$-100y^7 + 5$	7
$3y^7 + 2y^4$	7
$8m^3n^6 - 3m^2n^9$	11

The ***degree*** of a polynomial is based on:

the highest degree of any one term in the polynomial.



The degree of ~~the~~ polynomial is 9 (highest degree of any 1 term)

Pg 134: 1-9