

Algebra Mini Series: Lesson 1

What is Algebra and How Do I Collect Like Terms?

Rationale: Algebra...the word that can send fear trembling in your very core. Not for long! In this lesson, not only will you hopefully understand what algebra is, but you'll get a good sense of why it's not so scary.

One thing is very important though...at almost every step ask yourself "Do I understand what just happened?" It's in the moments where you say "No" that we need to focus.

This lesson: Within this lesson we are going to focus on these four main topics:

1. What is algebra?
2. What is algebraic manipulation?
3. What is a term?
4. How do I collect like terms?

Lesson Sequence: We'll start with two short videos. In the first video, you'll look at what algebra is, and the two main reasons for you to understand algebraic manipulation: evaluation and solving. In the second video, you'll look at what is meant by a 'term' and how to identify and collect like terms. Please feel free to rewind or fast forward as much as you want. This is learning on your time, at your pace, in short ... it's all about you!

[Video 1: What Is Algebra?](#)

[Video 2: How Do I Collect Like Terms?](#)

So there you have it. Doesn't sound so scary now. We need to see if you've really internalized what was in the videos. To do this we are going to play a little game and then hit up the most revolutionary educational site in recent times ... Khan Academy. It's like chewy nugget in a mars bar for math peeps, surrounded by extra chocolate.

On the Khan Academy site you're about to visit there are 3 activities you should complete. There are suggestions for mastery goals found at the top of the screen and there is a scratch pad option that allows you to work on the page you're viewing. If that's not enough, there are hints and example videos found to the right of the workspace.

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The image shows a screenshot of the Khan Academy website interface. The main content area is titled "Adding fractions with unlike denominators" and includes a scratchpad with the equation $\frac{1}{6} + \frac{1}{4} = ?$ and the handwritten text "MATH!". The interface also features a sidebar with a "Topics" cloud, a "Hint" cloud, and a "Video Examples" cloud. The "Video Examples" cloud points to a video player showing a fraction addition example. The "Hint" cloud points to a "Check Answer" button. The "Activate Scratchpad to write on the screen!" cloud points to the scratchpad area. The "Topics" cloud points to the sidebar navigation menu.

[Activity 1: Matching Like Terms Game \(Math Warehouse\)](#)

[Activity 2: Combining Like Terms with Negative Coefficients \(Khan Academy\)](#)

[Activity 3: Combining Like Terms with Distribution and Negative Numbers \(Khan Academy\)](#)

[Activity 4: Manipulating Basic Expressions with Rational Coefficients \(Khan Academy\)](#)

If the Order of Operations (BEDMAS) is causing issues... check this out:

https://www.khanacademy.org/math/pre-algebra/order-of-operations/order_of_operations/v/introduction-to-order-of-operations

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What Else Do You Need To Know?:

In this section, you can provide up to five questions you have about the material. Write them on this lesson or just email them to your teacher. If you're feeling brave, tweet them out to friends ...see if they know!

	What's up?
Question 1	
Question 2	
Question 3	
Question 4	
Question 5	

Show me what you know!

Alright, we've made it. Now it's time to demonstrate your understanding and create something that might help others along the way. I want you to create a piece that shows me you now know this material. That same piece should be designed to help others who would have trouble just like you did earlier. The only thing I ask, if you've done one of these lessons before, please try something new!

The piece can be any format you like, provided that it communicates your understanding, and can be used to help others having similar struggles.

Some suggested formats are:

Screencast

Show Me Composition

Weebly or Blog Site

PowerPoint / Prezi

Poster

NearPod Lesson

A song/Poem

When you've finished it, come see me and we'll talk about ways, if you're comfortable, to share it.