

Introduction

“Math is hard.” That’s what it said on my husband’s t-shirt. I wish I could add the words, “It’s a myth. Don’t believe him.” However, I do believe that a solid foundation is necessary to excel in Math. Building up a solid foundation is hard work, but it does help you to advance in Math without much frustration. That being said, we’ll spend some time reviewing Pre-Algebra before we begin our Algebra I course.

Before we begin, I’d like to make some remarks to help you to understand how this course works.

1. *Textbook* refers to *Beginning and Intermediate Algebra* by Tyler Wallace which you can download from SchoolhouseTeachers.com.
2. SchoolhouseTeachers.com staff have written a solutions guide for the assigned work. Part of the Algebra journey is learning to correct mistakes, so please study the solutions after you have finished your assignment. Make sure you understand the process before moving on.
3. I’d encourage you to correct all your mistakes before you proceed. See it as just another way to enhance your learning.
4. Each day’s lesson will take approximately one hour or less. If you fly through the questions correctly, that’s terrific. If you find it’s taking you more than an hour, talk to your parent/teacher about doing just the odd problems or just the evens. Math shouldn’t be painful!
5. This course mainly follows the flow of *Beginning and Intermediate Algebra* by Tyler Wallace. However, from time to time, I incorporate other exercises as well. Please be sure to read the additional notes and complete any extra exercises included.
6. After each chapter, you’ll be asked to solve the example questions in *Beginning Algebra Lab Notebook 1 and II* by the same author. You don’t have to write in the notes section at the top of each page. However, if you find that writing in the notes would be helpful, please do so. My purpose is to use these questions as review exercises for each chapter. I have worked out the solutions for these questions and grouped them by chapter in the *Beginning Algebra Lab Notebook Solutions Guide*.

Let’s begin!

Week 1: Pre-Algebra Review

Day 1: Chapter 0: Pre-Algebra

1. Read textbook pp. 7–8: Chapter 0.1 (Pre-Algebra – Integers).

2. Notes:

I. $7 - 9 = 7 + (-9)$
 but $7 - 9 \neq 7(-9)$ } Notice the difference?

You'll learn more about $7(-9)$ later this week.

II. When you subtract negative numbers like what you see in Example 9 and Example 10 in the textbook, you can remind yourself that when negative meets with negative, it will become positive. But when negative meets with positive, it stays negative.

For example: $11 - (-8) = 11 + 8$



Negative meets with negative; the sign becomes positive.

$11 + (-8) = 11 - 8$



Negative meets with positive; the sign stays negative.

3. Do 0.1 Practice – Integers: questions 1–20 on p. 10 in the textbook.

Day 2

1. Read textbook p. 9: Chapter 0.1 (Pre-Algebra – Integers).

2. Notes:

Remember how we said on Day 1 that we would learn what to do with $7(-9)$? Now we know. Whenever we see numbers inside or outside parentheses without an operator ($+$, $-$, \times , \div), it means that we multiply the numbers. The expression $7(-9)$ means 7 times -9 , which equals -63 .

3. Do 0.1 Practice – Integers: questions 31–40 on p. 10 and 51–60 on p. 11 in the textbook.

Day 3

1. Read textbook pp. 12–13: Chapter 0.2 (Pre-Algebra – Fractions). Stop after the explanation of Example 15 which ends with "...until it cannot be reduced any further."

2. Do 0.2 Practice – Fractions: questions 1–20 on p. 16 in the textbook.

Remember: All the rules that you have learned about integers apply to the fractions as well.

Day 4

1. Before you read, recap:

The dot between two numbers or two fractions means “multiply.”

Example:

$$10 \cdot 13 = 130 \quad \text{or} \quad \frac{1}{2} \cdot \frac{3}{4} = \frac{3}{8}$$

2. Read textbook (continue from where you stopped) pp. 13–14: Chapter 0.2 (Pre-Algebra – Fractions). Stop after Example 18.
3. Do 0.2 Practice – Fractions: questions 21–30 on p. 16 and questions 43–52 on p. 17 in the textbook.

Day 5

1. Before you read, recap:

LCD is an acronym for “Least Common Denominator.”

2. Read textbook (continue from where you stopped yesterday) pp. 14–15: Chapter 0.2 (Pre-Algebra – Fractions).
3. Do 0.2 Practice – Fractions: questions 61–80 on p. 17 in the textbook.