

AOPS Pre Algebra Review

Objective :

To review the basics of pre algebra and prepare for Algebra 1, while giving students new to AOPS and Scio the chance to familiarize themselves with the text's format and website's layout.

Students will be able to :

- Complete and explain operations such as addition, subtraction, multiplication, division, exponents, radicals, and inverses.
- Analyze situations and problems by creating expressions and solving for an unknown variable.
- Use ratios including fractions, proportions, and rates to create relationships and solve problems.

Materials:

- The Art of Problem Solving Pre Algebra text
- Grid paper
- Pencil
- Scio Academy enrollment in Math Masters

A note on AOPS:

AOPS lessons are designed with a short intro then some problems that they want the student to attempt. Once attempting, the lesson walks the student through completing the problems and ends with some homework problems to try independently. Students should take seriously the need to think about and take time to try the lesson problems.

This course is not designed to be a complete pre algebra course, but rather is a way to effectively review the material while introducing students to the format of the AOPS text.

Lessons:

§	Scio Lesson Video	AOPS Text Assignment
1	<u>§ 1.4 -1.6 : Operators & Reciprocals</u>	Complete § 1.6
2	<u>§ 2.1 -2.3 Squares & Power of Zero</u>	Read § 2.1 -2.3
3	<u>§ 2.4 - 2.5 : Negative Exponents</u>	Complete § 2.4
4	<u>§ 3.1 - 3.4 : Multiples & Factors</u>	Complete § 3.4
5	<u>§ 3.5 - 3.8 : GCD & LCM</u>	Complete § 3 review problems
6	<u>§ 4.5 - 4.6 : Simplifying Fractions</u>	Complete § 4.5
7	<u>§ 4.7 - 4.9 : Adding Fractions</u>	Complete § 4.7
8	<u>§ 5.1 - 5.3 : Expressions & Equations</u>	Complete § 5.1
9	<u>§ 5.4 - 5.6 : Word Problems</u>	Complete § 5.2
10	<u>§ 6.1 - 6.5 : Decimals</u>	Complete § 6.3
11	<u>§ 7.1 - 7.3 : Ratios</u>	Complete § 7.2
12	<u>§ 8.1 - 8.2 : Percents</u>	Complete § 8.1
13	<u>§ 8.3 - 8.4 : Percents Increase & Decrease</u>	Read § 8.2-8.3
14	<u>§ 15 : Problem Solving Strategies</u>	Complete § 8 review problems
15	<u>§ 9.1 - 9.2 : Square Roots</u>	Complete § 9.1

Students should watch the lesson video, then complete the homework assignment above. A student should be able to watch the lesson one day and then complete the text assignment the next, thus making this a 30 day review.

If your student has any questions, please don't hesitate to have him email me (lori@ScioAcademy.com). By the time he's done, he'll be familiar with how AOPS works and have a solid foundation to build upon in Algebra 1.