

Pre-Algebra Syllabus

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Objectives:

- To enjoy mathematics, develop curiosity and begin to appreciate its elegance and power
- To learn the tools, language, and expressions necessary for Algebra
- To prepare students for 8th grade math in either Algebra 1 or 8th grade Common Core
- To build on previous years' instruction into statistics, geometry, graphing and the number system
- To push students to the limits of their abilities by helping and scaffolding them along the way

Textbook: Glencoe Math Accelerated - A Pre-Algebra Program

Road Map for the Year

Unit 1 - How do **Rational Numbers and Exponents** work with negative integers?

- The Language of Algebra
- Operations with Integers
- Operations and Rational Numbers
- Powers and Roots

Unit 2 - Why are **Proportionality and Linear Relationships** a necessary building block for algebra?

- Ratio, proportion, and similar figures
- Percents
- Algebraic Expressions
- Equations and Inequalities
- Linear Functions

Unit 3 - How can **Sampling and Inference** help us make sense of vast quantities of data?

- Statistics and Probability

Unit 4 - Are these Geometric Figures the same size?

- Congruence, Similarity, and Transformations
- Volume and Surface Area

Class Structure:

1. **Warm up** - Review concept from yesterday, apply it in an unfamiliar situation, and transfer that knowledge to the new concept for the day
 2. **Homework Review** - We go over homework from the previous day
 3. **Lesson** - New material for the day
 4. **Homework time** - Practice on new material. Due the next class day. Complete as much as possible in class.
- 20 point quiz **every** Friday
 - Your homework from the week can be used as a reference
 - 100 point test at the end of each chapter

IB in Math

- As St. Luke transitions into an IB school, IB summative assessments are going to replace traditional tests and projects.
- In math, these assessments will test students on 4 Criterion:
 - Criterion A: Knowing and Understanding
 - Criterion B: Investigating Patterns
 - Criterion C: Communication
 - Criterion D: Application in Real Life Situations
- Approaches to Learning - We will additionally be working on the following study skill areas:
 - Communication, social, self management, research, and thinking

Additional Assignments:

- 50 point ALEKS assignments due on the first of the Month
 - ALEKs requirement is 20 topics learned per Month (ALEKS will inform you when you have completed the requirement)
- 25-50 point projects occasionally

Supplies:

- Spiral Notebook for homework, note taking, and warm-up problems
- Folder for loose papers, tests, and other handouts
- Pencils and Pens
- Scientific Calculator (TI-30X IIS recommended)
- Computer and internet access at home