

## **Pre-Algebra**

2011-2012, Webworks

36 weeks

7th – 8th grade

1 Credit

### **Course Tutor:**

Cheryl Claussen

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### **Course Description:**

BJU Pre-Algebra focuses on introductory algebra topics. It is designed to facilitate the transition from the concrete concepts of arithmetic to the abstract concepts of algebra.

While completing the course work for Pre-Algebra, students will:

- Solve linear equations and model real-world situations using linear equations.
- Compare and order integers.
- Perform operations with integers (addition, subtraction, multiplication, division).
- Graph points on the coordinate plane.
- Convert fractions and decimals to percentages; convert percentages to fractions and decimals.
- Calculate percentage of change.
- Solve proportions.
- Construct and interpret bar graphs and circle graphs.
- Find the mean, median, mode, and range for a set of data.
- Express rational numbers as decimals and decimals as fractions.
- Find the probability of a simple event.
- Express numbers in scientific notation.
- Perform operations with fractions.
- Identify and use rational number properties.
- Solve problems involving scaled drawings.
- Identify and classify numbers in the real number system.
- Graph linear equations.
- Calculate area, volume, surface area, perimeter, and circumference.
- Identify congruence, similarity, and symmetry.
- Simplify, add, and subtract polynomials.
- Multiply monomials and polynomials.

### **Course Notes:**

Work from the text is to be checked by the parent using the Teacher's Manual. Corrections need to be done each week and parents will need to keep a record of assignments completed. Some assignments will need to be scanned and e-mailed to the tutor so she can see that that work is being done correctly. All tests, quizzes, and exams need to be signed by a parent, scanned, and e-mailed to the tutor for scoring. The tutor will assign percentage scores that are averaged at the end of each semester. Parents can then give a letter grade according to their grading scale. Class is recorded so the student can watch it again to help understand the material.

### **Course Prerequisites:**

This course is recommended for seventh graders who plan to take first-year algebra in the eighth grade or for eighth-graders who plan to take first-year algebra in the ninth grade. It will be helpful for students entering this course to already be proficient in multiplication facts as well as adding, subtracting, multiplication, and dividing fractions.

### **Course Fees:**

Pre Algebra

None

**Required Texts:**

*BJU Press; Pre-Algebra I Student Text*, 2nd ed. ISBN 978-1-59166-546-5, item # 233114; \$42.50

*BJU Press; Pre-Algebra I Teacher's Manual*; 2nd ed. ISBN 978-1-59166-547-2; item # 247460, \$55.00

**Required Supplies:**

- 3-ring binder with loose leaf paper and tab dividers
- Pencils, eraser, ruler, graph paper, and a red pen
- A scientific calculator is required. Suggested: TI-30XS MultiView Scientific. A graphing calculator is not required.
- Pen Pad for writing on the whiteboard (can be purchased from any computer store)

**Tutor Bio:**

My husband and I live in Hickory Corners, Michigan with our three children and 2 cats. We love the Lord and do our best to serve Him wherever and whenever we can. I hold a Bachelor of Science Degree with majors in both Mathematics and Computer Science from Alma College and a Master of Science Degree in Computer Science from Western Michigan University. I have taught Computer Science and Mathematics at professional, collegiate, and high school levels in both private and public settings. Before our homeschooling journey began, I was a software engineer and database administrator for Eaton Corporation. I also travelled throughout west Michigan as a database consultant. Now, the majority of my time is spent schooling my children and developing our small homestead. When I have free time, I love long walks with friends.