

# Grand Island Public Schools

## PREALGEBRA

**Course Length:** Two semesters

**Grade Levels:** 9, 10, 11, 12

**Prerequisite Courses:** Not proficient in Math 8, IEP, or assessment scores combined with teacher recommendations necessary for cotaught courses

### **Course Description:**

Prealgebra reviews basic algebra skills using problem-solving techniques and graphing.

### **Prealgebra Course Standards**

**As a result of their participation in this course, students will:**

#### **Strand 1: Communicating Mathematical Thinking**

- Build new mathematical knowledge through problem solving. (Problem Solving)
- Apply and adapt a variety of appropriate strategies to solve problems. (Problem Solving)
- Recognize and use connections among mathematical ideas and/or apply in contexts outside of mathematics. (Connections)
- Investigate, develop, and evaluate mathematical arguments and proofs. (Reasoning and Proof)
- Select, apply, and move fluently among mathematical representations to solve problems. (Representation)

#### **Strand 2: Number and Operations**

- Know and use real numbers expressed in a variety of forms.
- Read, write, order, and compare real numbers and find their approximate location on a number line.
- Compute with rational numbers.
- Compute using exponents.
- Use estimation to verify the reasonableness of results.

#### **Strand 3: Algebraic Concepts**

- Express quantitative relationships by using algebraic terminology, expressions, equations and graphs.
- Interpret and evaluate expressions involving integer powers.
- Graph linear functions.
- Solve linear equations over the rational numbers.

#### **Strand 4: Geometry, Spatial Concepts, and Measurement**

- Use the properties of similarity to solve problems.
- Use the Pythagorean theorem to find the length of a missing side of a right triangle.
- Find and label the perimeter and area of triangles and polygons with right angles.

#### **Strand 5: Data Analysis, Probability, and Statistics**

- Collect, organize, and represent data sets.
- Analyze sets of data using measures of central tendency and graphical representations.