

Algebra A, and Algebra B

Syllabus

Supplies:

- Spiral Notebook (Notes, Homework, Assignments will stay in Spiral)
- Pencil (No Pens)
- Calculator (I do have some for use in class, but he/ she might want one for homework. It does not have to be a graphing calculator.) (A **TI-30XIIS** is what we have in class. Around \$15 Wal-Mart & Staples)

The student will:

- 1.1 demonstrate an understanding of the subsets, properties, and operations of the real number system;
- 1.2 demonstrate an understanding of the relative size of rational and irrational numbers;
- 1.3 articulate, model, and apply the concept of inverse (e.g., opposites, reciprocals, and powers and roots);
- 1.4 describe, model, and apply inverse operations;
- 1.5 apply number theory concepts (e.g., primes, factors, divisibility and multiples) in mathematical problem solving;
- 1.6 connect graphical and symbolic representations of absolute value;
- 1.7 use real numbers to represent real-world applications (e.g., slope, rate of change, probability, and proportionality);
- 1.8 use a variety of notations appropriately (e.g. exponential, functional, square root);
- 1.9 select and apply an appropriate method (i.e., mental mathematics, paper and pencil, or technology) for computing with real numbers, and evaluate the reasonableness of results;
- 1.10 perform operations on algebraic expressions and informally justify the procedures chosen;
- 1.11 perform operations on matrices in real-world problem solving (i.e., addition, subtraction, and scalar multiplication).
- 2.1 recognize, analyze, extend, and create a variety of patterns;
- 2.2 use algebraic thinking to generalize a pattern by expressing the pattern in functional notation;
- 2.3 solve linear systems using a variety of techniques;
- 2.4 communicate the meaning of variables in algebraic expressions, equations, and inequalities;
- 2.5 identify and represent a variety of functions;
- 2.6 apply and interpret rates of change from graphical and numerical data;
- 2.7 analyze graphs to describe the behavior of functions;
- 2.8 interpret results of algebraic procedures;
- 2.9 apply the concept of variable in simplifying algebraic expressions, solving equations, and solving inequalities;
- 2.10 interpret graphs that depict real-world phenomena;
- 2.11 model real-world phenomena using functions and graphs;

- 2.12 articulate and apply algebraic properties in symbolic manipulation;
- 2.13 analyze relationships which can and which cannot be represented by a function;
- 2.14 graph inequalities and interpret graphs of inequalities;
- 2.15 describe the domain and range of functions and articulate restrictions imposed either by the operations or by the real-life situations which the functions represent;
- 2.16 describe the transformation of the graph that occurs when coefficients and/or constants of the corresponding linear equations are changed.
- 2.17 find and represent solutions of quadratic equations.
- 3.1 apply geometric properties, formulas, and relationships to solve real-world problems;
- 3.2 solve problems using the midpoint formula;
- 3.3 apply right triangle relationships including the Pythagorean Theorem and the distance formula;
- 4.1 use concepts of length, area, and volume to estimate and solve real-world problems;
- 4.2 apply and communicate measurement concepts and relationships in algebraic and geometric problem-solving situations;
- 4.3 demonstrate an understanding of rates and other derived and indirect measurements (e.g., velocity, miles per hour, revolutions per minute, cost per unit);
- 4.4 make decisions about units, scales, and measurement tools that are appropriate for problem situations involving measurement;
- 4.5 analyze precision, accuracy, tolerance, and approximate error in measurement situations.
- 5.1 collect, represent, and describe linear and nonlinear data sets developed from the real world;
- 5.2 make predictions from a linear data set using a line of best fit;
- 5.3 interpret a set of data using the appropriate measure of central tendency;
- 5.4 choose, construct, and analyze appropriate graphical representations for a data set;
- 5.5 demonstrate an understanding of the concept of random sampling;
- 5.6 apply counting principles of permutations and combinations using appropriate technology;
- 5.7 model situations to determine theoretical and experimental probabilities.

My planning period is 1st from 8:15- 9:10.

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You can leave a message in office at (263-5541 extension 429).

I will be sending progress reports in middle of each 9 weeks for you to sign.

Coach Mobley