MATH 7A SYLLABUS

1. **Language of Algebra**

- properties, words to algebra, writing algebraic expressions, problem solving

2. **Integers**

- definition, compare, arithmetic with, order of operations, coordinate systems

3. **Rational and Irrational Numbers**

- definitions, arithmetic (with and w/out calc), conversions, classifying numbers

4. **Algebra I**

- substitution, formulas, 1 and 2 step equations, writing equations from word problems

5. **Proportionality**

- define, writing rations, solving a proportion, proportions in word problems,

proportionality in charts and graphs, COP, writing equations using the COP,

scale drawings/maps, similar polygons

6. **Percents**

-define, conversions, solving % with equations and proportions, tax, discounts, commission,

simple and compound interest, % change and error

7. **Algebra II**

- simplifying algebraic expressions (distributive property and like terms), definitions,

polynomial types, equations with like terms, distributive property and

variables on both sides of = sign,

8. **Statistics and Probability**

- simple probability, equal and unequal probability, theoretical and experimental probablility, mean, median, mode, range, quartiles, outliers, mean absolute deviations

9. **Inequalities**

-what are they, solving and graph inequalities (all types) (positive and negative coeffecients),

word problems with inequalities

10. **Algebra and Geometry**

- review basic geometry, angle pairs, apply algebra to geometry (perimeter, area, angle pairs),

coordinate geometry

11. **3-D Geometry**

- identify shapes, vertices, faces and edges, formulas

12. **Linear Equations**

- what are they, graphing (chart and y=mx+b), slopes and intercepts

13. **Right Triangles**

- parts, Pythagorean Theorem, missing legs/hypotenuse, using right triangles

14. **Transformations**

- reflections, rotations, dilations, translations

15. **Polynomials**

- adding/subtracting, multiplying/dividing, factoring