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