



7th Grade Mathematics Curriculum

Welcome to ACE's Tutoring LLC's 7th Grade Mathematics sessions. These sessions are conducted in hourly increments and will provide both enlightenment and enrichment for 7th Grade Mathematics. At the end of these sessions, the student may be assigned a worksheet that will further their understanding of any of the offered topics. At this tutoring firm, the goal is to ensure that the enrolled student receives a letter grade of a B or higher and have a deeper understanding of the following topics:

- **RATIOS AND PROPORTIONAL RELATIONSHIPS**
 - Analyze proportional relationships and use them to solve real-world and mathematical problems.
 - Computing associated unit rates using proportions
 - Recognized and representing proportional relationships between two quantities.
 - Using proportions to solve multistep ratio/percent problems.
 - **Heart Stamp Assessment** ♥
- **THE NUMBER SYSTEM**
 - Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers
 - Review of integers
 - Adding/Subtraction of Rational Numbers using the number line
 - Additive Inverse
 - Multiplication/Division of integers
 - Converting Rational Numbers to Decimals via Long Division
- **EXPRESSIONS AND EQUATIONS**
 - Use properties of operations to generate equivalent expressions.
 - Applying properties to add, subtract, factor and expand linear expressions
 - Solve real-life and mathematical problems using numerical and algebraic expressions and equations
 - Introducing the slope-intercept form ($y = mx + b$)
 - Real world problems that involves slope intercept form.
 - **Diamond Stamp Assessment** ♦

- **GEOMETRY**

- Draw, construct and describe geometrical figures and describe the relationships between them.
 - Similar figures
 - Drawing figures given certain conditions
- Solve real-life and mathematical problems involving angle measure, circles, area, surface area, and volume
 - **Circles:** Understanding the formulas for the following terms and applying them to real life scenarios:
 - Circumference
 - Area
 - Diameter
 - Radius
 - **Angles:** Understanding the following terms and applying them to solve for an unknown angle:
 - Supplementary Angles
 - Complementary Angles
 - Vertical Angles
 - Adjacent Angles
- Club Stamp Assessment ♣

- **STATISTICS AND PROBABILITY**

- Use sampling to draw conclusions about a population.
 - Population vs. Sample
 - Draw concise conclusions given sample data of a population
- Broaden understanding of statistical problem solving.
 - GAISE Model
- Summarize and describe distributions representing one population and draw informal comparisons between two populations.
 - Summarize quantitative data sets utilizing the mean absolute deviation, interpreting mean as the balance point.
- Investigate chance processes and develop, use, and evaluate probability models
 - What is Probability?
 - Approximating probability by collecting data
 - Developing a probability model
 - Uniform Probability Model
 - Non-Uniform Probability Model
 - Finding probability of compound events using organized lists, tables , tree diagrams and simulations.
- Spade Stamp Assessment ♠

For in class settings, worksheets, activities and projects will be incorporated within these topics for the enrolled student(s) to achieve a better understanding. A prize system will also be established for any student who excels in these topics. If you have any questions, please feel free to contact our company email acestutoringllc@gmail.com.

Thank you and we hope to see you at our sessions!