Math 6 (2 of 2) Honors

Course Description:

Math 6 Honors (2 of 2) builds on concepts such as positive and negative integers and fractions to learn about rational numbers and how to compare them. Topics include: finding the distance between points on the number line and in the coordinate plane, solving geometry problems, relationships between variables and how to represent them, ratios and unit rages, solving real-world problems, data and how to display and mathematically describe data.

Course Objectives:

- Add, subtract, multiply, and divide integers.
- Identify and interpret integers, including opposite numbers, in real-world problems and on number lines.
- Compare and order numbers using number lines and inequality statements.
- Write and solve inequalities using substitution and number lines.
- Represent relationships between pairs of numbers in the coordinate plane.
- Interpret and compare absolute values using number lines and inequality statements.
- Find horizontal and vertical distances on a coordinate plane.
- Write expressions and equations to represent math and real-world problems.
- Evaluate expressions and solve equations using properties of operations.
- Rewrite and identify equivalent expressions using properties.
- Identify and compare ratio relationships.
- Solve problems using ratio relationships.
- Identify statistical questions.
- Identify and calculate relationships and values to describe data sets.
- Represent and interpret data displays.

Required Materials:

In course.

Course Overview:

Unit 1: Numbers and Inequalities

- Discussion (Lessons 1-5)
- Learn (Lessons 1-5)
    - Key Terms
    - Text and Videos: Integers; Operations with Integers; Rational Numbers; Inequalities; Solution Sets for Inequalities
    - Workbooks
- Enrichment (Check Your Understanding: Lessons 1-5)
- Checkpoint (Lessons 1-4)
- Unit 1 Exam (Lesson 5)

Unit 2: Absolute Value and Distance

- Discussion (Lessons 6-10)
- Learn (Lessons 6-10)
    - Key Terms
    - Text and Videos: Absolute Value; Absolute Value in the Real World; Distance in the Coordinate Plane; Shapes in the Coordinate Plane; Problem Solving in the Coordinate Plane
    - Workbooks
- Enrichment (Check Your Understanding: Lessons 6-10)
- Checkpoint (Lessons 6-9)
- Project (Lesson 8)
- Unit 2 Exam (Lesson 10)

Unit 3: Variables and Relationships

- Discussion (Lessons 11-15)
- Learn (Lessons 11-15)
    - Key Terms
    - Text and Videos: Using Variables; Equivalent Expressions; Independent and Dependent Variables; Equations and Graphs for Relationships; Problem Solving with Relationships
    - Workbooks
- Enrichment (Check Your Understanding: Lessons 11-15)
- Checkpoint (Lessons 11-14)
- Project (Lesson 13)
- Unit 3 Exam (Lesson 15)

Unit 4: Ratios and Rates

- Discussion (Lessons 16-20)
- Learn (Lessons 16-20)
    - Key Terms
    - Text: Ratios; Ratios in Tables and Graphs; Comparing Ratios; Unit Rates; Problem Solving with Unit Rates
    - Workbooks

- Enrichment (Check Your Understanding: Lessons 16-20)
- Checkpoint (Lessons 16-19)
- Project (Lesson 18)
- Unit 4 Exam (Lesson 20)

Unit 5: Data, Means, and Variability

- Discussion (Lessons 21-25)
- Learn (Lessons 21-25)
    - Key Terms
    - Text and Videos: Data, Measurement, and Conclusions; Dot Plots and the Spread of Data; Histograms and the Spread of Data; Means and the Mean Absolute Deviation; Medians and Stem-and-Leaf Plots
    - Workbooks
- Enrichment (Check Your Understanding: Lessons 21-25)
- Checkpoint (Lessons 21-24)
- Project (Lesson 23)
- Unit 5 Exam (Lesson 25)

Unit 6: Medians and Statistical Summaries

- Discussion (Lessons 26-29)
- Learn (Lessons 26-29)
    - Key Terms
    - Text and Videos: Quartiles and Box-and-Whisker plots; The Effect of Changing a Data Set; Determining the Best Statistical Summary; Review of Units 1–4; Review of Units 5–6 and Final Exam
    - Workbooks
- Enrichment (Check Your Understanding: Lessons 26-30)
- Checkpoint (Lessons 26-28)
- Unit 6 Exam (Lesson 28)
- Course Final Exam (Lesson 30)
- Course Summary (Lesson 30)
- Course Bibliography (Lesson 30)