

Grade 6 Mathematics Course Syllabus

Cicely L. Tyson Middle/High School
Grade 6 Mathematics Course
Monday – Friday
Full Year Course (September through June)

Ms. Mary Drake
School phone number: 973 – 414- 8600
Extension 53111 Room Number: 111
Teacher’s email address: (Response
within 48 hours)

m.drake@eastorange.k12.nj.us

Welcome and Introduction:

“Welcome to grade 6 Mathematics course. I’m your instructor, Ms. Drake. We’ll be together for the next 40 weeks (10 Months). In this course, we’ll come together to improve your academics, communication skills, social skills, and study skills through reading, writing, problem-solving, critical thinking, and project-based learning. Grade 6 Mathematics includes a combination of rational numbers, patterns, geometry, and integers in preparation for one- and two- steps equations and inequalities.”

Course Theme:

“Don't worry about moving slowly, worry about standing still.” -- Chinese proverb **because**
“Everybody needs some inspiration, everybody needs some motivation, mix it up with some imagination, and use your natural gifts.” -- The Kinks **and remember** *“An activity becomes creative when the doer cares about doing it right, or better.” – John Updike, writer*

Course Goals:

- Provide students with the tools they need to be effective and independent learners
- An emphasis on fractions solidifies students understanding of rational number operations
- Applying skills learned to algebraic equations
- Prepare students for algebra and beyond by developing their problem solving skills, improving their conceptual understanding, and providing the student with the tools needed for ongoing success.

Methods of Instruction:

Different teaching methods will be utilized to ensure that all students are receiving instruction in their preferred learning style. The following will be used during various aspects of the lesson: group discussions, individual assignments, easy to use technology, hands-on activities, learning labs (stations), strategies, manipulatives, differentiated instruction, visual aids, reference sheets, video tutorials, and graphic organizers.

Course Components Specifics:

I expect all students to think of themselves as scholars, to respect themselves and others, and to be on-time, seated and ready to learn when the bell rings. I expect all students to come to class daily with the required materials and to participate in every aspect of the daily activities. I expect all students to come to class with a positive attitude and ready to enhance their skills and knowledge. All students will be required to adhere to the testing environment when be assessed. All students will be verbally warned during assessments and will be deducted 3-points for each warning given, and when the students has received 3 warnings during the assessment, the student will fail that assessment and will not be permitted to retest. I utilize this procedure as a way of preparing students for appropriate etiquette during standardizes assessments and to ensure that all students are provided with the appropriate atmosphere to do their very best.

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Attendance and Make-up Work:

Attendance policy will be provided by the East Orange Board of Education within the **parent – student handbook**. When you receive your handbook please be sure to read it thoroughly to educate yourself with the policy and procedures. Should the student be absence because of a district/school recognized absence, it is the student's responsibility to retrieve the assignments missed and returned them completed within 3 school days. The student is responsible for getting all class notes from a classmate. The following are examples of recognized absences:

1. Participation in official school/district activities (performances, field trips, and etc.)
2. Medical reasons with a doctor's note
3. College visits
4. Pass indicating you were with an administrator/guidance/nurse/ CST/social worker/discipline
5. Pass indicating you are with another teacher, if you have prior permission from the period teacher to be more than 10 minutes late to class.

Course Requirements and Grading:

- All students will be graded on test, quizzes, projects, tasks, participation (positive and negative), classwork, and homework. Note: Positive participation are (+) and negative participation are (-). Examples of positive participation would be: participating in class discussions, activities, using accounting language (math oriented), participating in the stations and completing the appropriate labs with minimum redirecting, and etc. Examples of negative participation would be inappropriate discussions during activities, not performing the duties of your group's role (writer, speaker, etc.), refusing to take part in the activities of the lesson, and etc.
- I will be utilizing a point system in my classroom.
 - 100 points – 90 points = letter grade of an A
 - 89 points – 80 points = letter grade of an B
 - 79 points – 70 points = letter grade of an C
 - 69 points – 65 points = letter grade of an D
 - 64 points or below = letter grade of an F
- Weight of each component unless specified differently by the IEP (provided by CST):

- Test	20%
- Quizzes	15%
- Projects/Tasks	15%
- Participation	20%
- Classwork	20%
- Homework	10%
- The student's effort, participation, and attendance greatly impact their grades. Since mathematics is a concept that require skills to build upon the previous skill, if the student is absence often or frequently it can negatively affect the student's ability in a variety of ways to be successful.
- All students are assessed every Friday on the skills covered during the week. If the student is absence on Friday, the student will be given the assessment the same day in which he/she return to class. **Friday's are the only days in which homework is not assigned.**

- All students will be assessed by the district 1-2 times per semester (cycle) using benchmarks and using the Renaissance Assessment. The benchmark assessments are used to measure the student's learning objectives (SLO) for the semester (cycle). The benchmark will be administered a total of 5 times during the school year. (units 1 – 5)
- All students will complete 2 projects (PBL). 1 due at the end of 2nd semester (around January – February) and 1 due at the end of 4th semester (around May – June). Exact dates to be announced. A notice will be sent home.

Opportunities for Extra Support:

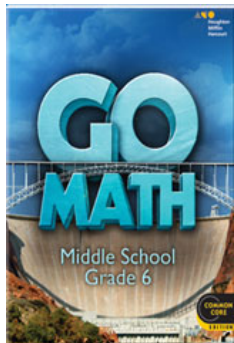
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How to Reach Me:

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Required textbook/Online Resources Used:



This is a write-in textbook and every student will be supplied with one.

IXL.com (username and password to be provided)

my.hrw.com (video tutorial) and all of the online resources they you will need.

Supplies:

3 sharpened pencils

Wedge eraser

Personal pencil sharpener (silently)

3 - 1 subject perforated notebooks **or** 1- 3-subject perforated notebook **or** a 2-inch binder with 3 dividers (Tabs)

Quarterly/Unit Schedule:

Unit 1 (Benchmark): "Operations and Statistical Variability"

- List of SLO
- Compute quotients of fractions
- Construct visual fraction models to represent quotients and explain the relationship between multiplication and division of fractions
- Solve real-world problems involving quotients of fractions and interpret the solutions in the context given.

- Fluently add, subtract, multiply, and divide multi-digit decimals and whole numbers using standard algorithms.
- Use positive and negative numbers to describe quantities in real-world situations.
- Calculate, compare, and interpret measures of center and variability in a data set to answer a statistical question. (Including median, mean, interquartile range, mean absolute deviation, and overall pattern).
- o Homework assignments are Monday through Thursday
- o Assessments (Quiz, test) are Friday
- o District benchmark at the end of the unit

Unit 2 (Benchmark): "Rational Numbers"

- List of SLO
 - Locate positive and negative rational numbers on the number line and explain the meaning of absolute value of a rational number as indicating locations on opposite sides of zero on the number line and as magnitude for a positive or negative quantity in a real-world situation.
 - Use statements of inequality to determine relative positions of two rational numbers on a number line; Write and explain statements of order for rational numbers in real-world contexts..
 - Plot ordered pairs in all four quadrants on the coordinate plane and describe their reflections.
 - Solve real world problems mathematically by graphing points in all four quadrants of the coordinate plane. Use the absolute value of the differences of their coordinates to find distances between points with the same first coordinate or same second coordinate.
 - Explain the relationship of two quantities or measures of a given ratio and use ratio language to describe the relationship between the two quantities. For example, "The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak." *"For every vote candidate A received, candidate C received nearly three votes."*
 - Use rate language in the context of a ratio relationship to describe a unit rate a/b associated with a ratio $a:b$ with $b \neq 0$. For example, "This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is $3/4$ cup of flour for each cup of sugar." "We paid \$75 for 15 hamburgers, which is a rate of \$5 per hamburger."
 - Use ratio and rate reasoning to solve real world and mathematical problems that include making tables of equivalent ratios, solving unit rate problems, finding percent of a quantity as a rate per 100.
 - Use ratio and rate reasoning to convert measurement units (manipulate and transform units appropriately when multiplying or dividing quantities).
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 - o Assessments (Quiz, test) are Friday
 - o District benchmark at the end of the unit

Semester Project (PBL)/Midterm Exam

Project Due Date: January , 2016

Unit 3 (benchmark): "Expressions"

- List of SLO
 - Use mathematical language to identify parts of an expression.
 - Write and evaluate numerical expressions involving whole number exponents.
 - Read, write, and evaluate expressions in which letters stand for numbers (Including formulas that arise from real-world contexts).

- Apply the properties of operations to generate equivalent expressions (Including the distributive property; for example, *express $36 + 8$ as $4(9 + 2)$ and $y + y + y = 3y$.*
- Identify when two expressions are equivalent; for example, *Are the two expressions equal? $81 + 18$ and $9(9 + 2)$.*
- Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two numbers less than or equal to 12.
- Homework assignments are Monday through Thursday
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- District benchmark at the end of the unit

Unit 4 (benchmark): "Equations and Inequalities"

- List of SLO
- Use variables to represent numbers and write expressions when solving real world or mathematical problems.
- Solve an equation or inequality to answer the question: which values from a specified set, if any, make the equation or inequality true? and check the solution using substitution to determine whether a given number in a specified set makes an equation or inequality true. (including formulas $V=lwh$ and $V=bh$).
- Write and solve one step equations that represent real world or mathematical problems.
- Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or condition in a real world or mathematical problem and represent them on a number line diagram.
- Use variables to represent two quantities that change in relationship to one another in a real world problem and write an equation to express one quantity, thought of as the dependent variable, in terms of another quantity, thought of as the independent variable.
- Analyze the relationship between the dependent and independent variables in an equation using graphs and tables. For example, in a problem involving motion at constant speed, list and graph ordered pairs of distances and times, and write the equation $d = 65t$ to represent the relationship between distance and time.
- Homework assignments are Monday through Thursday
- Assessments (Quiz, test) are Friday
- District benchmark at the end of the unit

Unit 5 (benchmark): "Ratio and Proportion"

- List of SLO
- Find the area of right triangles, other triangles, special quadrilaterals and polygons by composing into rectangles or decomposing into triangles and other shapes to solve real world or mathematical problems.
- Represent three dimensional figures using nets made of rectangles and triangles, and use the nets to find the surface area of the figures in the context of solving real world and mathematical problems.
- Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes. Show that the volume is the same as it would be if found by multiplying the edge lengths.
- Draw polygons in the coordinate plane given the coordinates of the vertices and use the coordinates to solve real-world distance, perimeter, and area problems.
- Display numerical data in plots on the number line (including dot plots, histograms, and box plots) and summarize in relation to their context.
- Homework assignments are Monday through Thursday

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- District benchmark at the end of the unit
- Semester Project (PBL)

Project Due Date: June , 2016

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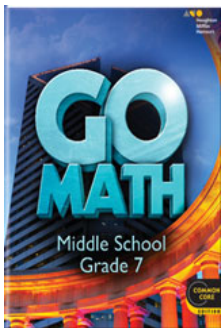
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Quarterly/Unit Schedule:

Unit 1 (Benchmark): "The Number System"

- List of SLO
- Describe and model, on a horizontal and vertical number line, real-world situations in which rational numbers are combined.
- Apply the additive inverse property to subtraction problems and develop the argument that the distance between two points is the absolute value of the difference between their coordinates.
- Explain why a divisor cannot be zero and why division of integers results in a rational number.

- Model the multiplication and division of signed numbers using real-world contexts, such as taking multiple steps backwards.
- Convert a rational number to a decimal using long division and explain in oral or written language why the decimal is either a terminating or repeating decimal.
- Apply properties of operations as strategies to add, subtract, multiply, and divide rational numbers.
- Solve mathematical and real-world problems involving addition, subtraction, multiplication, and division of rational numbers.
 - o Homework assignments are Monday through Thursday
 - o Assessments (Quiz, test) are Friday
 - o District benchmark at the end of the unit

Unit 2 (Benchmark): "Expressions and Equations"

- List of SLO
 - Apply the properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients (including additive and multiplicative inverse, distributive, commutative, and associative properties).
 - Use equivalent expressions to demonstrate the relationship between quantities and determine simpler solutions to a problem, such as $a + 0.05a = 1.05a$ means that "increase by 5%" is the same as "multiply by 1.05."
 - Solve multi-step real life and mathematical problems with rational numbers in any form (fractions, decimals, percents) by applying properties of operations and converting rational numbers between forms as needed, and then assess the reasonableness of results using mental computation and estimation strategies.
 - Use variables to represent quantities in a real-world or mathematical problem by constructing simple equations and inequalities to represent problems. *Equations of the form $px + q = r$ and $p(x + q) = r$ and inequalities of the form $px + q > r$ or $px + q < r$, where p , q , and r are specific rational numbers.*
 - Fluently solve equations and inequalities and graph the solution set of the inequality; interpret the solutions in the context of the problem.
 - o Homework assignments are Monday through Thursday
 - o Assessments (Quiz, test) are Friday
 - o District benchmark at the end of the unit

Semester Project (PBL)/Midterm Exam

Project Due Date: January , 2016

Unit 3 (benchmark): "Ratios and Proportions"

- List of SLO
 - Calculate and interpret unit rates of various quantities involving ratios of fractions that contain like and different units using real world examples such as speed and unit price. *For example, if a person walks $\frac{1}{2}$ mile in each $\frac{1}{4}$ hour, compute the unit rate as the complex fraction $\frac{1/2}{1/4}$ miles per hour, equivalently 2 miles per hour.*
 - Determine if a proportional relationship exists between two quantities e.g. by testing for equivalent ratios in a table or graph on the coordinate plane and observing whether the graph is a straight line through the origin.
 - Identify the constant of proportionality (unit rate) from tables, graphs, equations, diagrams, and verbal descriptions.

- Write equations to model proportional relationships in real world problems. *For example, if a recipe that serves 6 people calls for 2 ½ cups of sugar. How much sugar is needed if you are serving only 2 people?*
 - Represent real world problems with proportions on a graph and describe how the graph can be used to explain the values of any point (x, y) on the graph including the points (0, 0) and (1, r), recognizing that r is the unit rate.
 - Solve multi-step ratio and percent problems using proportional relationships, including scale drawings of geometric figures, simple interest, tax, markups and markdowns, gratuities and commissions, and fees.
 - Use freehand, mechanical (i.e. ruler, protractor) and technological tools to draw geometric shapes with given conditions (e.g. scale factor), focusing on constructing triangles.
- Homework assignments are Monday through Thursday
 - Assessments (Quiz, test) are Friday
 - District benchmark at the end of the unit

Unit 4 (benchmark): "Statistics and Probability"

- List of SLO
 - Solve multi-step ratio and percent problems using proportional relationships (*simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error*).
 - Distinguish between valid and invalid samples from a population by determining if the sample is representative of the subgroups within the population (*e.g. if the class had 50% girls and the sample had 25% girls, then the number of girls was not representative of the whole population*).
 - Use random sampling to produce a representative sample, develop valid inferences about a population with an unknown characteristic of interest, and compare the variation in estimates using multiple samples of the same and different size.
 - Visually and numerically compare the means and variations of two distinct populations (such as the mean height of different sports teams) to draw informal comparative inferences about measures of center and variability using graphical representations and statistical calculations.
 - Interpret and express the likelihood of a chance event as a number between 0 and 1, relating that the probability of an unlikely event happening is near 0, a likely event is near 1, and 1/2 is neither likely nor unlikely.
 - Conduct experimental probability events that are both uniform (*rolling a number cube multiple times*) and non-uniform (*tossing a paper cup to see if it lands up or down*) to collect and analyze data to make predictions for the approximate relative frequency of chance events.
 - Develop uniform and non-uniform theoretical probability models by listing the probabilities of all possible outcomes in an event, for instance, the probability of the number cube landing on each number being 1/6. Then, conduct an experiment of the event using frequencies to determine the probabilities of each outcome and use the results to explain possible sources of discrepancies in theoretical and experimental probabilities.
- Homework assignments are Monday through Thursday
 - Assessments (Quiz, test) are Friday
 - District benchmark at the end of the unit

Unit 5 (benchmark): "Geometry"

- List of SLO
- Use variables to represent quantities in a real-world or mathematical problem; write and fluently solve simple equations and inequalities, interpret the solutions in the context of the

problem and graph the solution set on a number line. [Please note this unit addresses standard 7.EE.4 again to assess fluency.]

- Use tools strategically to solve multi-step real-world and mathematical problems involving positive and negative rational numbers in any form (converting between forms as needed) and determine the reasonableness of the answers. [Please note this unit addresses standard 7.EE.3 again to assess fluency.]
 - Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.
 - Write and solve simple algebraic equations involving supplementary, complementary, vertical, and adjacent angles for multi-step problems and finding the unknown measure of an angle in a figure.
 - Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.
 - Describe, using drawings or written descriptions, the 2-dimensional figures that result when 3-dimensional figures (right rectangular prisms and pyramids) are sliced from multiple angles given both concrete models and a written description of the 3-dimensional figure.
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assignments will not be given full credit and incomplete work will not be accepted. Students are expected to use **a number 2 pencil only** for class and homework assignments in a **notebook specifically for mathematics**. Assignments submitted in ink will not be accepted. I expect all students to show their work (steps) when completing all assignments. I expect all students' assignments to be neatly written or typed and to exhibit the pride of the student when completing and turning in. I expect all students to behave appropriate during class and all labs because **you are responsible for you**.

Attendance and Make-up Work:

Attendance policy will be provided by the East Orange Board of Education within the **parent – student handbook**. When you receive your handbook please be sure to read it thoroughly to educate yourself with the policy and procedures. Should the student be absence because of a district/school recognized absence, it is the student's responsibility to retrieve the assignments missed and returned them completed within 3 school days. The student is responsible for getting all class notes from a classmate. The following are examples of recognized absences:

1. Participation in official school/district activities (performances, field trips, and etc.)
2. Medical reasons with a doctor's note
3. College visits
4. Pass indicating you were with an administrator/guidance/nurse/ CST/social worker/discipline
5. Pass indicating you are with another teacher, if you have prior permission from the period teacher to be more than 10 minutes late to class.

Course Requirements and Grading:

- All students will be graded on test, quizzes, projects, tasks, participation (positive and negative), classwork, and homework. Note: Positive participation are (+) and negative participation are (-). Examples of positive participation would be: participating in class discussions, activities, using accounting language (math oriented), participating in the stations and completing the appropriate labs with minimum redirecting, and etc. Examples of negative participation would be inappropriate discussions during activities, not performing the duties of your group's role (writer, speaker, etc.), refusing to take part in the activities of the lesson, and etc.
- I will be utilizing a point system in my classroom.
 - 100 points – 90 points = letter grade of an A
 - 89 points – 80 points = letter grade of an B
 - 79 points – 70 points = letter grade of an C
 - 69 points – 65 points = letter grade of an D
 - 64 points or below = letter grade of an F
- Weight of each component unless specified differently by the IEP (provided by CST):
 - Test 20%
 - Quizzes 15%
 - Projects/Tasks 15%
 - Participation 20%
 - Classwork 20%
 - Homework 10%
- The student's effort, participation, and attendance greatly impact their grades. Since mathematics is a concept that require skills to build upon the previous skill, if the student is absence often or frequently it can negatively affect the student's ability in a variety of ways to be successful.
- All students are assessed every Friday on the skills covered during the week. If the student is absence on Friday, the student will be given the assessment the same day in which he/she return to class. **Friday's are the only days in which homework is not assigned.**
- All students will be assessed by the district 1-2 times per semester (cycle) using benchmarks and/or using the Renaissance Assessment. The benchmark assessments are used to measure

the student's learning objectives (SLO) for the semester (cycle). The benchmark will be administered a total of 5 times during the school year. (units 1 – 5)

- All students will complete 2 projects (PBL). 1 due at the end of 2nd semester (around January – February) and 1 due at the end of 4th semester (around May – June). Exact dates to be announced. A notice will be sent home.

Opportunities for Extra Support:

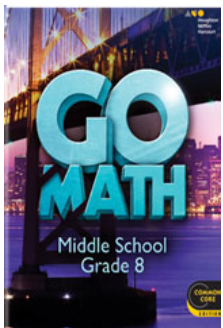
After school tutoring provided for all students who are interested, however, please notify me prior to the end of the day that you will like to come for tutoring. Parent permission is required because the student's parent will be responsible for providing transportation after receiving tutoring. THERE WILL BE NO SCHOOL BUS SERVICES PROVIDED.

How to Reach Me:

Please see the information on the top of this syllabus.

The first parent/teacher meeting will be our back to school night schedule for September. *Date of the **back to School night** will be **September 21, 2015** from 5:00 PM to 8:00 PM and **open house / parent conferences** will be **November 17, 2015** from 5:30 PM to 8:00 PM.* Please look for the notice that will come home by the student and/or the mail after the 1st report card is scheduled to come home.

Required textbook/Online Resources Used:



This is a write-in textbook and every student will be supplied with one.

IXL.com (username and password to be provided)

my.hrw.com (video tutorial) and all of the online resources they you will need.

Supplies:

3 sharpened pencils

Wedge eraser

Personal pencil sharpener (silently)

3 - 1 subject perforated notebooks **or** 1- 3-subject perforated notebook **or** a 2-inch binder with 3 dividers (Tabs)

Quarterly/Unit Schedule:

Unit 1 (Benchmark): "Geometry"

- List of SLO
- Utilize the properties of rotation, reflection, and translation to model and relate pre-images of lines, line segments, and angles to their resultant image through physical representations and/or Geometry software.
- Apply an effective sequence of rotations, reflections, and transitions to prove that two dimensional figures are congruent.

- Use the coordinate plane to locate pre-images of two-dimensional figures and determine the coordinates of a resultant image after applying dilations, rotations, reflections, and translations.
 - Recognize dilation as a reduction or an enlargement of a figure and determine the scale factor.
 - Apply an effective sequence of transformations to determine similar figures in which corresponding angles are congruent and corresponding sides are proportional. Write similarity statements based on such transformations.
 - Justify facts about angles created when parallel lines are cut by a transversal.
 - Justify facts about the exterior angles of a triangle, the sum of the measures of the interior angles of a triangle and the angle-angle relationship used to identify similar triangles.
- Homework assignments are Monday through Thursday
 - Assessments (Quiz, test) are Friday
 - District benchmark at the end of the unit

Unit 2 (Benchmark): "The Number System"

- List of SLO
 - Compare rational and irrational numbers to demonstrate that the decimal expansion of irrational numbers do not repeat; show that every rational number has a decimal expansion which eventually repeats and convert such decimals into rational numbers.
 - Use rational numbers to approximate and locate irrational numbers on a number line and estimate the value of expressions involving irrational numbers.
 - Apply the properties of integer exponents to simplify and write equivalent numerical expressions.
 - Use scientific notation to estimate and express the values of very large or very small numbers and compare their values (how many times larger/smaller is one than the other).
 - Perform operations using numbers expressed in scientific notation, including problems where both decimals and scientific notation are used (interpret scientific notation generated when technology has been used for calculations).
 - In real-world problem solving situations choose units of appropriate size for measurement of very small and very large quantities.
- Homework assignments are Monday through Thursday
 - Assessments (Quiz, test) are Friday
 - District benchmark at the end of the unit

Semester Project (PBL)/Midterm Exam

Project Due Date: January , 2016

Unit 3 (benchmark): "Equations"

- List of SLO
- Graph and analyze the different representations of proportional relationships and interpret the unit rate as the slope of the graph which indicates the rate of change.
- Derive the equation of a line ($y = mx$ for a line through the origin and the equation $y = mx + b$ for a line intercepting the vertical axis at b) and use similar triangles to explain why the slope (m) is the same between any two points on a non-vertical line in the coordinate plane.

- Solve linear equations in one variable with rational number coefficients that might require expanding expressions using the distributive property and/or combining like terms, including examples with one solution, infinite solutions, or no solution.
 - Solve systems of linear equations in two variables by inspection, algebraically, and/or graphically (estimate solutions) to demonstrate solutions correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.
 - Construct a function to model the linear relationship between two variables and determine the rate of change and initial value of the real world data it represents from either graphs or tabulated values.
Sketch a graph of a function from a qualitative description and give a qualitative description of a graph of a function.
- Homework assignments are Monday through Thursday
 - Assessments (Quiz, test) are Friday
 - District benchmark at the end of the unit

Unit 4 (benchmark): "Functions and Geometry"

- List of SLO
 - Define functions as a rule that assigns one output to each input and determine if data represented as a graph or in a table is a function.
 - Compare two functions each represented in a different way (numerically, verbally, graphically, and algebraically) and draw conclusions about their properties (rate of change and intercepts).
 - Utilize equations, graphs, and tables to classify functions as linear or non-linear, recognizing that $y = mx + b$ is linear with a constant rate of change.
 - Evaluate square roots and cubic roots of small perfect squares and cubes respectively and use square and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^3 = p$ where p is a positive rational number. Identify $\sqrt{2}$ as irrational.
 - Explain a proof of the Pythagorean Theorem and its converse.
 - Utilize the Pythagorean Theorem to determine unknown side lengths of right triangles in two and three dimensions to solve real-world and mathematical problems
 - Use the Pythagorean Theorem to determine the distance between two points in the coordinate plane.
- Homework assignments are Monday through Thursday
 - Assessments (Quiz, test) are Friday
 - District benchmark at the end of the unit

Unit 5 (benchmark): "Geometry"

- List of SLO
 - Using a linear equation to model real life problems then solve it by interpreting the meaning of the slope and the intercept.
 - Construct and interpret scatter plots for bivariate measurement data and identify and interpret data patterns (clustering, outliers, positive or negative association, possible lines of best fit, and nonlinear association).
 - Construct frequency/relative frequency tables to analyze and describe possible associations between two variables
 - Know and apply the appropriate formula for the volume of a cone, a cylinder, or a sphere to solve real-world and mathematical problems
- Homework assignments are Monday through Thursday
 - Assessments (Quiz, test) are Friday

- District benchmark at the end of the unit
- Semester Project (PBL)

Project Due Date: June , 2016