

UNITS OF STUDY	STANDARDS, BENCHMARKS, GLCEs OR HSCEs	BIG IDEAS / KEY CONCEPTS	ASSESSMENTS		LEARNING STRATEGIES <i>Skills</i>	CONTENT ACTIVITIES <i>Knowledge</i>	VOCABULARY	INSTRUCTIONAL RESOURCES
			FOR LEARNING <i>(Formative)</i>	OF LEARNING <i>(Summative)</i>				
	1 <sup>st</sup> Trimester							Textbook: Connected Mathematics Program 2 Publisher: Prentice Hall Copyright: 2006
	Stretching and Shrinking							
<i>Similar Figures</i>	G.TR.07.03 Understand that in similar polygons, corresponding angles are congruent and the ratios of corresponding sides are equal; understand the concepts of similar figures and scale factor.	Congruent Polygons	Homework Check Up Partner Quiz	Unit, Trimester, and Completion Assessments	Discover properties of similar polygons	Identify polygons are similar if they have the same shape and have corresponding angles or sides	Similar Image Corresponding Ratio Rep-Tile	<b>Stretching and Shrinking</b> Investigation: 1 - 4
	G.TR.07.04 Solve problems about similar figures and scale drawings.	Similar Figures	Homework Check Up Partner Quiz	Unit, Trimester, and Completion Assessments	Calculate distances on a map Given two polygons, find missing side lengths	Find missing lengths using similar polygons	Similar Image Corresponding Ratio Rep-Tile	<b>Stretching and Shrinking</b> Investigation: 1 - 4
	G.TR.08.09 Understand the definition of a dilation from a point in the plane. Relate the definition of a dilation from a point in the plane to the definition of similar polygons.	Similar figures and dilations	Homework Check Up Partner Quiz	Unit, Trimester, and Completion Assessments	Use dilations to form similar polygons.	See that similar figures can be dilations.	Similar figures dilations	<b>Stretching and Shrinking</b> Investigation: 1 - 2
	G.TR.07.06 Understand and use the fact that when two triangles are similar with scale factor of r, their areas are related by a factor of r <sup>2</sup> .	Scale Factor Relationships	Homework Check Up Partner Quiz	Unit, Trimester, and Completion Assessments	Use scale factor to calculate area of triangles	Given two similar triangles, the areas are related by scale factor squared	Similar Image	<b>Stretching and Shrinking</b> Investigation: 3
	N.FL.07.05 Solve proportion problems using such methods as unit rate scaling, finding equivalent fractions and solving the proportion equation a/b=c/d. Know how to see patterns about proportional situations in tables.	Scale Facotrs	Homework Check Up Partner Quiz	Unit, Trimester, and Completion Assessments	Use proportions to find corresponding parts.	Understand that corresponding parts can be found using scale factors and proportions.	Corresponding parts Scale Factors Proportions	<b>Stretching and Shrinking</b> Investigation: 3-4
	G.TR.07.05 Show that two triangles are similar using the criteria: corresponding angles are congruent (AAA similarity); the ratios of two pairs of corresponding sides are equal and the included angles are congruent (SAS similarity); ratios of all pairs of corresponding sides are equal (SSS similarity); use these criteria to solve problems and to justify arguments.	Similar Triangles	Homework Check Up Partner Quiz	Unit, Trimester, and Completion Assessments	Relationships between similar triangles	Identify properties of similar triangles	Ratio Equivalent Ratio Congruent Corresponding Pairs	<b>Stretching and Shrinking</b> Investigation: 4  Supplemented material needed for any and all criteria (AAA, SAS, SSS) not shown in CMP2 book

	<b>Comparing and Scaling</b>							
<i>Ratios</i>	N.FL.07.05 Solve proportion problems using such methods as unit rate, scaling, finding equivalent fractions, and solving the proportion equation $a/b = c/d$ ; know how to see patterns about proportional situations in tables.	Solving Proportions	Homework Check Up Partner Quiz	Unit, Trimester, and Completion Assessments	Find and interpret unit rates, and know how to make comparisons Use proportional reasoning to solve problems Use unit rates to write an equation to represent a pattern in a data table	Ability to set up and solve proportions Understand the four types of comparison statements: ratio, percent, fraction, and difference Scaling up or down to find equivalent ratios	Unit Rate Rate Scaling Equivalent Fractions Proportion	<b>Comparing and Scaling</b> Investigation: 4
	N.FL.07.03 Calculate rates of change including speed.	Rates of change	Homework Check Up Partner Quiz	Unit, Trimester, and Completion Assessments	Find rates of change.	Ability to set up and solve proportions To find rates of change.	Unit rate Proportions	<b>Comparing and Scaling</b> Investigation: 3
	N.FL.08.11 Solve problems involving ratio units, such as miles per hour, dollars per pound or persons per square mile.	Ratios	Homework Check Up Partner Quiz	Unit, Trimester, and Completion Assessments	Solve problems involving ratio units	Understand the concept of ratios.	Ratios Units	<b>Comparing and Scaling</b> Investigation: 3
	N.MR.07.04 Convert ratio quantities between different systems of units, such as feet per second to miles per hour.	Converting Ratios	Homework Check Up Partner Quiz	Unit, Trimester, and Completion Assessments	Moving between equivalent units	Rate tables, graphs, and equations are different representations of data	Ratio Proportion	<b>Comparing and Scaling</b> Investigation: 3
	<b>2<sup>nd</sup> Trimester</b>							
	<b>Moving Straight Ahead</b>							
<i>Linear Functions</i>	N.FL.07.03 Calculate rates of change including speed.	Rates of Change	Homework Check Up Partner Quiz	Unit, Trimester, and Completion Assessments	Investigate walking rate and slope	Calculation of rates of change	Linear Functions Linear Relationship Independent Variable Dependent Variable	<b>Moving Straight Ahead</b> Investigation: 1
	N.FL.07.05 Solve proportion problems using such methods as unit rate scaling, finding equivalent fractions and solving the proportion equation $a/b=c/d$ . Know how to see patterns about proportional situations in tables.	Unit Rates	Homework Check Up Partner Quiz	Unit, Trimester, and Completion Assessments	Solve proportion problems using such methods as unit rate	Identify the unit rate as a rate of change in a linear relationship.	Unit Rate Rate of Change	<b>Moving Straight Ahead</b> Investigation: 1

	A.PA.07.01 Recognize when information given in a table, graph, or formula suggests a directly proportional or linear relationship.	Linear Relationships	Homework Check Up Partner Quiz	Unit, Trimester, and Completion Assessments	Demonstrate a direct proportion or linear relationship from information in tables, graphs, and formulas	Identify linear relationships in tables, graphs, and equations	x-intercept y-intercept Coefficient	<b>Moving Straight Ahead</b> Investigation: 1-2
	A.RP.07.02 Represent directly proportional and linear relationships using verbal descriptions, tables, graphs, and formulas, and translate among these representations.	Linear Representations	Homework Check Up Partner Quiz	Unit, Trimester, and Completion Assessments	Discuss linear relationships and direct proportions	Construct tables, graphs, and equations for linear relationships	x-intercept y-intercept Coefficient	<b>Moving Straight Ahead</b> Investigation: 1- 2
	A.PA.07.05 Recognize and use directly proportional relationships of the form $y = mx$ , and distinguish from linear relationships of the form $y = mx + b$ , $b$ non-zero; understand that in a directly proportional relationship between two quantities one quantity is a constant multiple of the other quantity.	Proportional Relationships	Homework Check Up Partner Quiz	Unit, Trimester, and Completion Assessments	Compare directly proportional relationships to linear relationships	Ability to recognize directly proportional relationships to linear relationships	Directly Proportional	<b>Moving Straight Ahead</b> Investigation: 1 - 2
	A.PA.07.06 Calculate the slope from the graph of a linear function as the ratio of “rise/run” for a pair of points on the graph, and express the answer as a fraction and a decimal; understand that linear functions have slope that is a constant rate of change.	Slope Of Linear Functions	Homework Check Up Partner Quiz	Unit, Trimester, and Completion Assessments	Discuss rate of change as it relates to slope  Calculate slope from a graph; emphasize the idea of rise over run	Calculate slope based on information found in a graph  Understand rise over run	Slope	<b>Moving Straight Ahead</b> Investigation: 1, 2 & 4
	A.PA.07.07 Represent linear functions in the form $y = x + b$ , $y = mx$ , and $y = mx + b$ , and graph, interpreting slope and y-intercept.	Slope And y-intercept	Homework Check Up Partner Quiz	Unit, Trimester, and Completion Assessments	Identify slope and y-intercept from an equation ( $y = mx + b$ ) or graph	Identify and use slope-intercept form	Slope-intercept Form	<b>Moving Straight Ahead</b> Investigation: 1, 2 & 4
	A.PA.07.04 For directly proportional or linear situations, solve applied problems using graphs and equations, eg, the heights and volume of a container with uniform cross-section, height of water in a tank being filled at a constant rate; degrees Celsius and degrees Fahrenheit; distance and time under constant speed.	Linear Representations	Homework Check Up Partner Quiz	Unit, Trimester, and Completion Assessments	Solve applied problems using graphs and equations.	Understand how to read a graph to solve problems.  Understand how to read an equation to solve problems.	Directly Proportional Slope Y-intercept Constant Rate of Change	<b>Moving Straight Ahead</b> Investigation: 1, 2 & 4
	A.FO.07.08 Find and interpret the x and/or y intercepts of a linear equation or function. Know that the solution to a linear equation of the form $ax+b=0$ corresponds to the point at which the graph of $y = ax+b$ crosses the x axis	Linear Representations	Homework Check Up Partner Quiz	Unit, Trimester, and Completion Assessments	Find and interpret the x and/or y intercepts of a linear equation or function.	Understand how to use the slope-intercept form of a line to find the x and/or y intercepts.	x-intercept y-intercept	<b>Moving Straight Ahead</b> Investigation: 1, 2 & 4
	A.PA.07.03 Given a directly proportional or other linear situation, graph and interpret the slope and intercept(s) in terms of the original situation; evaluate $y = mx + b$ for specific $x$ values, e.g., weight vs. volume of water, base cost plus cost per unit.	Slope And Intercepts	Homework Check Up Partner Quiz	Unit, Trimester, and Completion Assessments	Set up directly proportional functions  Graph equations and determine slope and intercepts	Identify slope and intercepts	Slope Intercepts	<b>Moving Straight Ahead</b> Investigation: 1-4

	A.PA.07.11 Understand and use basic properties of real numbers: additive and multiplicative identities, additive and multiplicative inverses, commutativity, associativity, and distributive property of multiplication over addition.	Basic Properties Of Real Numbers	Homework Check Up Partner Quiz	Unit, Trimester, and Completion Assessments	Identify properties of real numbers	Use properties of equations to solve	Additive Identity Mult. Identity Additive Inverse Mult. Inverse Commutativity Associativity Distributive Property	Supplemented material, teach in Investigation 2
	A.FO.07.12 Add, subtract, and multiply simple algebraic expressions of the first degree, e.g., $(92x + 8y) - 5x + y$ , or $x(x + 2)$ and justify using properties of real numbers.	Algebraic Expressions	Homework Check Up Partner Quiz	Unit, Trimester, and Completion Assessments	Identify like terms	Combine like terms in expressions and equations	First Degree Properties of Equality Point of Intersection	Supplemented material, teach in Investigation 2
	A.FO.07.13 From applied situations, generate and solve linear equations of the form $ax + b = c$ and $ax + b = cx + d$ , and interpret solutions.	Solving Linear Equations	Homework Check Up Partner Quiz	Unit, Trimester, and Completion Assessments	Investigate multi-step equations	Solve multi-step equations  Interpret meaning of each term	Properties Equality Point of Intersection	<b>Moving Straight Ahead</b> Investigation: 2-3
	A.PA.07.09 Recognize inversely proportional relationships in contextual situations; know that quantities are inversely proportional if their product is constant, e.g., the length and width of a rectangle with fixed area, and that an inversely proportional relationship is of the form $y = k/x$ where $k$ is some non-zero number.	Inverse Proportional Relationships	Homework Check Up Partner Quiz	Unit, Trimester, and Completion Assessments	Use real world situations to show inversely proportional relationships	Recognize functions/situations that are inverse relationships	Inversely Proportional	Supplemented material, teach in Investigation 3
	A.RP.07.10 Know that the graph of $y = k/x$ is not a line, know its shape, and know that it crosses neither the x nor the y-axis.	Graph $y = k/x$	Homework Check Up Partner Quiz	Unit, Trimester, and Completion Assessments	Show equations $y = k/x$ will not cross the x- nor y-axis	Recognize the shape of a graph of the equation $y = k/x$	Inversely Proportional	Supplemented material, teach in Investigation 3
	<b>3<sup>rd</sup> Trimester</b>							
	<b>Data Distributions</b>							
<b>Data and Probability</b>	D.AN.07.04 Find and interpret the median, quartiles, and interquartile range of a given set of data.	Central Tendencies	Homework Check Up Partner Quiz	Unit, Trimester, and Completion Assessments	Calculate median and interquartile range	Calculate median and interquartile range	Median Interquartile Range	<b>Data Distributions</b> Investigation: 2
	D.AN.08.01 Determine which measure of central tendency (mean, median, mode) best represents a data set, e.g., salaries, home prices, for answering certain questions; justify the choice made.	Central Tendencies	Homework Check Up Partner Quiz	Unit, Trimester, and Completion Assessments	Distinguish between mean, median, and mode  Identify central tendency that represents data best	Understand difference between mean, median, and mode, and determine which central tendency represents data	Mean Median Mode	<b>Data Distributions</b> Investigation: 2

	D.AN.07.03 Calculate and interpret relative frequencies and cumulative frequencies for given data sets.	Frequencies	Homework Check Up Partner Quiz	Unit, Trimester, and Completion Assessments	Calculate and interpret relative frequencies and cumulative frequencies for given data sets	Calculate and interpret relative frequencies and cumulative frequencies for given data sets	Variability Categorical Data Numerical Data Value Bar Graph Ordered Bar Graph Line Plots	<b>Supplement</b>
	D.RE.07.01 Represent and interpret data using circle graphs, stem and leaf plots, histograms, and box and whisker plots, and select appropriate representation to address specific questions.	Interpreting Data	Homework Check Up Partner Quiz	Unit, Trimester, and Completion Assessments	Create circle graphs, stem and leaf plots, histograms, and box and whisker plots, and interpret data in each	Ability to represent and interpret data using appropriate graphs	Circle Graph Stem and Leaf Plot Histogram Box and Whisker Plot	<b>Supplement</b>
	N.MR.07.02 Solve problems involving derived quantities such as density, velocity, and weighted averages.	Derived Quantities	Check Up Partner Quiz  Homework	Unit, Trimester, and Completion Assessments	Display examples of derived quantities such as density, velocity, or weighted averages (grade point average)	Calculate derived quantities with accuracy	Derived Quantities (density) (velocity) (weighted averages)	<b>Supplement</b>
	<b>Samples and Populations</b>							
<i>Data</i>	D.RE.07.01 Represent and interpret data using circle graphs, stem and leaf plots, histograms, and box and whisker plots, and select appropriate representation to address specific questions.	Interpret Data	Homework Check Up Partner Quiz	Unit, Trimester, and Completion Assessments	Create circle graphs, stem and leaf plots, histograms, and box and whisker plots, and interpret data in each	Ability to represent and interpret data using appropriate graphs	Circle Graph Stem and Leaf Plot Histogram Box and Whisker Plot	<b>Samples and Populations</b> Investigation: 1  Supplemented material for circle graph and stem-and-leaf
	D.AN.07.04 Find and interpret the median, quartiles, and interquartile range of a given set of data.	Central Tendencies	Homework Check Up Partner Quiz	Unit, Trimester, and Completion Assessments	Calculate median and interquartile range	Calculate median and interquartile range	Median Interquartile Range	<b>Samples and Populations</b> Investigation: 1
	D.AN.07.02 Create and interpret scatter plots and find line of best fit; use an estimated line of best fit to answer questions about the data.	Scatterplots	Homework Check Up Partner Quiz	Unit, Trimester, and Completion Assessments	Make scatterplots and find the line of best fit	Understand how to create scatterplots and line of best fit	Scatterplot Line of Best Fit	<b>Samples and Populations</b> Investigation: 4
	<b>Geometric Constructions</b>							
Geometric constructions	G.SR.07.01 Use ruler and other tools to draw squares, rectangles, triangles and parallelograms with specified dimensions.	Geometric Constructions	Homework Check Up Partner Quiz	Completion Assessments	Use ruler, compass and straight edge to construct geometric constructions	Ability to draw quadrilaterals and triangles with specified dimensions	Square Rectangle Triangle Equilateral Isosceles Scalene parallelogram	<b>Supplement</b>

	G.SR.07.02 Use compass and straightedge to perform basic geometric constructions: the perpendicular bisector of a segment, and equilateral triangle, and the bisector of an angle; understand informal justifications.	Geometric Constructions	Homework Check Up Partner Quiz	Completion Assessments	Use compass and straight edge to construct geometric constructions	Ability to bisect a segment, construct equilateral triangles, and bisect an angle	Triangle Equilateral Bisector Ray Line segment Arc vertex	<b>Supplement</b>
	<b>Recognize Irrational Numbers</b>							
Square Roots and Cube Roots	N.MR.07.06 Understand the concept of square root and cube root and estimate using calculators	Square Roots and Cube Roots	Homework Check Up Partner Quiz	Completion Assessments	Find square roots and cube roots.	Students will understand the difference between rational and irrational numbers when investigating square roots and cube roots	Perfect square Square root Perfect cube Cube root Rational number Irrational number	<b>Supplement</b>
	<b>Skills Used Throughout All Units</b>							
Computing with Rational Numbers	N.FL.07.07 Solve problems involving operations with integers	Rational Number Operations	Homework Check Up Partner Quiz	Unit, Trimester, and Completion Assessments	Apply integer rules with in a mathematical context.	Understand what integers mean when solving mathematical problems.	Integers	Skills used throughout all units
	N.FL.07.08 Add, subtract, multiply, and divide positive and negative rational numbers fluently.	Rational Number Operations	Homework Check Up Partner Quiz	Unit, Trimester, and Completion Assessments	Utilize addition, subtraction, multiplication, and division operations with rational numbers	Knowledge of working with positive and negative rational numbers with different operations	Rational Numbers	Skills used throughout all units
	N.FL.07.09 Estimate results of computations with rational numbers.	Rational Number Operations	Homework Check Up Partner Quiz	Unit, Trimester, and Completion Assessments	Estimate rational answers.	Determine whether an answer is reasonable using estimation.	Estimate	Skills used throughout all units