

GRADE LEVEL: 10

SUBJECT: INTEGRATED MATH II

DATE: 2016 – 2017

GRADING PERIOD: QUARTER 1

MASTER COPY 4/6/2017

| CONTENT | STANDARD INDICATORS | SKILLS | ASSESSMENT | VOCAB | PRIORITY |
|---|---|--|---|--|-----------|
| ALGEBRA AND FUNCTIONS | | | | | |
| <ul style="list-style-type: none"> Linear equations in one variable One solution Infinitely many solutions No solutions | <p>8.AF.2: Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by transforming a given equation into simpler forms, until an equivalent equation of the form $x = a$, $a = a$, or $a = b$ results (where a and b are different numbers).</p> | <ul style="list-style-type: none"> Students will solve equations by showing answer in the form of $x=a$, $a=a$, or $a=b$. Students will identify solutions as one solution, many solutions, or no solution. | <ul style="list-style-type: none"> Class work Teacher observation | <ul style="list-style-type: none"> Linear equations Variable One solution Many solutions No solutions | Important |
| <ul style="list-style-type: none"> Function X-value Y-value Ordered pair | <p>8.AF.3: Understand that a function assigns to each x-value (independent variable) exactly one y-value (dependent variable), and that the graph of a function is the set of ordered pairs (x, y).</p> | <ul style="list-style-type: none"> Students will graph a function by using a function table. | <ul style="list-style-type: none"> Class work Teacher observation | <ul style="list-style-type: none"> Independent variable Dependent variable Function | Important |

| CONTENT | STANDARD INDICATORS | SKILLS | ASSESSMENT | VOCAB | PRIORITY |
|---|---|---|---|--|-----------|
| DATA ANALYSIS, STATISTICS, AND PROBABILITY | | | | | |
| <ul style="list-style-type: none"> • Equations • Linear relationships • Slope • Y-intercept | 8.DSP.3: Write and use equations that model linear relationships to make predictions, including interpolation and extrapolation, in real-world situations involving bivariate measurement data; interpret the slope and y-intercept. | <ul style="list-style-type: none"> • Students will interpret the slope and y-intercept from an equation. | <ul style="list-style-type: none"> • Class work • Teacher observation • Quiz | <ul style="list-style-type: none"> • Slope • Y-intercept • Bivariate data | Critical |
| REAL NUMBER AND EXPRESSIONS | | | | | |
| <ul style="list-style-type: none"> • Factor polynomials | AI.RNE.6: Factor common terms from polynomials and factor polynomials completely. Factor the difference of two squares, perfect square trinomials, and other quadratic expressions. | <ul style="list-style-type: none"> • Student will factor common terms from polynomials. | <ul style="list-style-type: none"> • Class work • Teacher observation | <ul style="list-style-type: none"> • Commons terms • Polynomials | Important |
| <ul style="list-style-type: none"> • Compute with polynomials | AI.RNE.7: Understand polynomials are closed under the operations of addition, subtraction, and multiplication with integers; add, subtract, and multiply polynomials and divide polynomials by monomials. | <ul style="list-style-type: none"> • Students will add, subtract, multiply or divide polynomials by monomials. | <ul style="list-style-type: none"> • Class work • Teacher observation • Quiz | <ul style="list-style-type: none"> • Monomial | Important |

| CONTENT | STANDARD INDICATORS | SKILLS | ASSESSMENT | VOCAB | PRIORITY |
|--|---|--|---|---|----------|
| FUNCTIONS | | | | | |
| <ul style="list-style-type: none"> • Functional relationship • Linear • Nonlinear • Maximum values • Minimum values | <p>AI.F.2: Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear, has a maximum or minimum value). Sketch a graph that exhibits the qualitative features of a function that has been verbally described. Identify independent and dependent variables and make predictions about the relationship.</p> | <ul style="list-style-type: none"> • Students will analyze a graph to identify the function, linear or nonlinear, and maximum or minimum value. | <ul style="list-style-type: none"> • Class work • Teacher observation • Quiz | <ul style="list-style-type: none"> • Linear • Nonlinear • Maximum values • Minimum values | Critical |
| LINEAR EQUATIONS, INEQUALITIES, AND FUNCTIONS | | | | | |
| <ul style="list-style-type: none"> • Linear equations • Solutions • Inequalities with integers, fractions, and decimals as coefficients | <p>AI.L.1: Understand that the steps taken when solving linear equations create new equations that have the same solution as the original. Solve fluently linear equations and inequalities in one variable with integers, fractions, and decimals as coefficients. Explain and justify each step in solving an equation, starting from the assumption that the original equation has a solution. Justify the choice of a solution method.</p> | <ul style="list-style-type: none"> • Students will solve linear equations with integers, fractions, and decimals as coefficients. • Students will solve inequalities with integers, fractions, and decimals as coefficients. | <ul style="list-style-type: none"> • Class work • Teacher observation • Quiz | <ul style="list-style-type: none"> • Inequalities | Critical |

| CONTENT | STANDARD INDICATORS | SKILLS | ASSESSMENT | VOCAB | PRIORITY |
|---|--|---|---|---|-----------|
| LINEAR EQUATIONS, INEQUALITIES, AND FUNCTIONS | | | | | |
| <ul style="list-style-type: none"> • Real-world problems with linear equations • Real-world problems with inequalities | AI.L.2: Represent real-world problems using linear equations and inequalities in one variable and solve such problems. Interpret the solution and determine whether it is reasonable. | <ul style="list-style-type: none"> • Students will solve word problems using linear equations • Students will solve word problems using inequalities. | <ul style="list-style-type: none"> • Class work • Teacher observation | | Critical |
| <ul style="list-style-type: none"> • Real-World Problems with Linear function • Equations • Graphs • Tables | AI.L.5: Represent real-world problems that can be modeled with a linear function using equations, graphs, and tables; translate fluently among these representations, and interpret the slope and intercepts. | <ul style="list-style-type: none"> • Students will solve word problems using linear equations, graphs, and tables. | <ul style="list-style-type: none"> • Class work • Teacher observation | | Critical |
| <ul style="list-style-type: none"> • Compound linear inequalities in one variable • Number line | AI.L.8: Solve compound linear inequalities in one variable, and represent and interpret the solution on a number line. Write a compound linear inequality given its number line representation. | <ul style="list-style-type: none"> • Students will solve linear inequalities and plot the solution on a number line. | <ul style="list-style-type: none"> • Class work • Teacher Observation | | Important |
| <ul style="list-style-type: none"> • Solve Equations • Coefficient | AI.L.11: Solve equations and formulas for a specified variable, including equations with coefficients represented by variables. | <ul style="list-style-type: none"> • Students will solve equations for a specified variable. | <ul style="list-style-type: none"> • Class work • Teacher observation | <ul style="list-style-type: none"> • Formulas • Coefficient | Important |

GRADE LEVEL: 10

SUBJECT: INTEGRATED MATH II

DATE: 2016 – 2017

GRADING PERIOD: QUARTER 2

MASTER COPY 4/6/2017

| CONTENT | STANDARD INDICATORS | SKILLS | ASSESSMENT | VOCAB | PRIORITY |
|---|--|--|--|--|----------|
| LINEAR EQUATIONS, INEQUALITIES, AND FUNCTIONS | | | | | |
| <ul style="list-style-type: none">• Linear Equations• Integers• Fractions• Decimals• Coefficients | AI.L.1: Understand that the steps taken when solving linear equations create new equations that have the same solution as the original. Solve fluently linear equations and inequalities in one variable with integers, fractions, and decimals as coefficients. Explain and justify each step in solving an equation, starting from the assumption that the original equation has a solution. Justify the choice of a solution method. | <ul style="list-style-type: none">• Students will solve linear equations in one variable with integers and decimals as coefficients. | <ul style="list-style-type: none">• Classwork• Teacher Observation• Quiz | <ul style="list-style-type: none">• Linear Equation• Integer• Coefficients | Critical |

| CONTENT | STANDARD INDICATORS | SKILLS | ASSESSMENT | VOCAB | PRIORITY |
|---|---|--|--|---|-----------|
| LINEAR EQUATIONS, INEQUALITIES, AND FUNCTIONS | | | | | |
| <ul style="list-style-type: none"> • Real-World Problems • Linear Equations • Variable | Al.L.2: Represent real-world problems using linear equations and inequalities in one variable and solve such problems. Interpret the solution and determine whether it is reasonable. | <ul style="list-style-type: none"> • Students will solve word problems using linear equations using one variable. | <ul style="list-style-type: none"> • Classwork • Teacher Observation | | Critical |
| <ul style="list-style-type: none"> • Solve Equations • Coefficients | Al.L.11: Solve equations and formulas for a specified variable, including equations with coefficients represented by variables. | <ul style="list-style-type: none"> • Students will solve equations for a specified variable. | <ul style="list-style-type: none"> • Classwork • Teacher Observation | <ul style="list-style-type: none"> • Formulas • Coefficient | Important |
| LOGIC AND PROOFS | | | | | |
| <ul style="list-style-type: none"> • Structure of Axiomatic System • Undefined Terms • Definitions • Postulates • Methods of Reasoning • Theorems • Proofs | G.LP.1: Understand and describe the structure of and relationships within an axiomatic system (undefined terms, definitions, axioms and postulates, methods of reasoning, and theorems). Understand the differences among supporting evidence, counterexamples, and actual proofs. | <ul style="list-style-type: none"> • Students will describe theorems and postulates within an axiomatic system. | <ul style="list-style-type: none"> • Classwork • Teacher Observation | <ul style="list-style-type: none"> • Axiomatic System • Undefined Terms • Postulates • Methods of Reasoning • Theorems • Proofs | Important |

| CONTENT | STANDARD INDICATORS | SKILLS | ASSESSMENT | VOCAB | PRIORITY |
|---|---|---|--|--|-----------|
| LOGIC AND PROOFS | | | | | |
| <ul style="list-style-type: none"> • Definitions for • Angle • Perpendicular Line • Parallel Line • Line Segment • Point • Line • Plane | G.LP.2: Know precise definitions for angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, and plane. Use standard geometric notation. | <ul style="list-style-type: none"> • Students will identify angle, perpendicular line, parallel line, and line segment. | <ul style="list-style-type: none"> • Classwork • Teacher Observation | <ul style="list-style-type: none"> • Angle • Perpendicular Line • Parallel Line • Line Segment | Important |
| <ul style="list-style-type: none"> • Converse • Inverse • If-Then Statements • If and Only If Statements | G.LP.3: State, use, and examine the validity of the converse, inverse, and contrapositive of conditional (“if – then”) and bi-conditional (“if and only if”) statements. | <ul style="list-style-type: none"> • Students will understand conditional and bi-conditional statements. | <ul style="list-style-type: none"> • Classwork • Teacher Observation • Quiz | <ul style="list-style-type: none"> • Conditional Statement • Bi-conditional Statement | Important |
| <ul style="list-style-type: none"> • Direct Proofs • Two Column • Paragraphs • Flow Charts | G.LP.4: Develop geometric proofs, including direct proofs, indirect proofs, proofs by contradiction and proofs involving coordinate geometry, using two column, paragraphs, and flow charts formats. | <ul style="list-style-type: none"> • Students will develop direct proofs by using a two column, paragraph, or flow chart format. | <ul style="list-style-type: none"> • Classwork • Teacher Observation | <ul style="list-style-type: none"> • Two Column Proof • Paragraph Proof • Flow Chart Proof | Important |

| CONTENT | STANDARD INDICATORS | SKILLS | ASSESSMENT | VOCAB | PRIORITY |
|--|---|---|--|---|-----------|
| ANGLES AND PLANES | | | | | |
| <ul style="list-style-type: none"> • Theorems About Lines and Angles • Vertical Angles • Transversal Crosses Parallel Lines • Alternate Interior Angles • Alternate Exterior Angles • Correspond Angles • Same Side Interior Angles • Perpendicular Bisector | <p>G.PL.3: Prove and apply theorems about lines and angles, including the following: vertical angles are congruent; when a transversal crosses parallel lines, alternate interior angles are congruent, alternate exterior angles are congruent, and corresponding angles are congruent; when a transversal crosses parallel lines, same side interior angles are supplementary; and points on a perpendicular bisector of a line segment are exactly those equidistant from the endpoints of the segment.</p> | <ul style="list-style-type: none"> • Students will apply theorems about lines and angles, including vertical angles, alternate interior angles, alternate exterior angles, and corresponding angles. | <ul style="list-style-type: none"> • Classwork • Teacher Observation • Quiz | <ul style="list-style-type: none"> • Vertical Angles • Alternate Interior Angles • Alternate Exterior Angles • Corresponding Angles | Important |

| CONTENT | STANDARD INDICATORS | SKILLS | ASSESSMENT | VOCAB | PRIORITY |
|--|---|--|--|--|-----------|
| ANGLES AND PLANES | | | | | |
| <ul style="list-style-type: none"> • Parallel Lines • Slope • Perpendicular Lines • Reciprocal Slopes • Equation of Line | <p>G.PL.4: Know that parallel lines have the same slope and perpendicular lines have opposite reciprocal slopes. Determine if a pair of lines are parallel, perpendicular, or neither by comparing the slopes in coordinate graphs and in equations. Find the equation of a line, passing through a given point, or that is parallel or perpendicular to a given line.</p> | <ul style="list-style-type: none"> • Students will determine if a pair of lines are parallel, perpendicular, or neither by comparing slopes. • Students will find the equation of a line, passing through a given point. | <ul style="list-style-type: none"> • Classwork • Teacher Observation | | Important |
| <ul style="list-style-type: none"> • Compass • Straightedge • Congruent Segments • Angles • Angle Bisectors • Perpendicular Bisectors • Altitudes • Medians • Parallel Lines • Perpendicular Lines | <p>G.PL.5: Explain and justify the process used to construct, with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.), congruent segments and angles, angle bisectors, perpendicular bisectors, altitudes, medians, and parallel and perpendicular lines.</p> | <ul style="list-style-type: none"> • Students will use a variety of tools to construct congruent segments and angles, an angle bisector, perpendicular bisectors, parallel and perpendicular lines. | <ul style="list-style-type: none"> • Classwork • Teacher Observation | <ul style="list-style-type: none"> • Compass • Straightedge • Angle Bisectors • Perpendicular Bisector | Important |

| CONTENT | STANDARD INDICATORS | SKILLS | ASSESSMENT | VOCAB | PRIORITY |
|---|--|---|--|--|-----------|
| TRIANGLES | | | | | |
| <ul style="list-style-type: none"> • Triangle Theorem • Pythagorean Theorem • Isosceles Triangle Theorem | <p>G.T.1: Prove and apply theorems about triangles, including the following: measures of interior angles of a triangle sum to 180°; base angles of isosceles triangles are congruent; the segment joining midpoints of two sides of a triangle is parallel to the third side and half the length; the medians of a triangle meet at a point; a line parallel to one side of a triangle divides the other two proportionally, and conversely; the Pythagorean Theorem, using triangle similarity; and the isosceles triangle theorem and its converse.</p> | <ul style="list-style-type: none"> • Students will measure interior angles of a triangle sum to 180. • Students will identify isosceles triangles that are congruent. | <ul style="list-style-type: none"> • Classwork • Teacher Observation | <ul style="list-style-type: none"> • Triangle Theorems • Pythagorean Theorem • Isosceles Triangle Theorem | Important |

| CONTENT | STANDARD INDICATORS | SKILLS | ASSESSMENT | VOCAB | PRIORITY |
|--|--|--|--|---|-----------|
| TRIANGLES | | | | | |
| <ul style="list-style-type: none"> • Congruent Triangles • Compass • Straightedge | <p>G.T.3: Explain and justify the process used to construct congruent triangles with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.).</p> | <ul style="list-style-type: none"> • Students will construct congruent triangles using a variety of tools. | <ul style="list-style-type: none"> • Classwork • Teacher Observation | <ul style="list-style-type: none"> • Congruent Triangles | Important |
| <ul style="list-style-type: none"> • Two Triangles • Corresponding Pairs of Angles • Corresponding Pairs of Sides | <p>G.T.4: Given two triangles, use the definition of similarity in terms of similarity transformations to decide if they are similar; explain using similarity transformations the meaning of similarity for triangles as the equality of all corresponding pairs of angles and the proportionality of all corresponding pairs of sides, and to establish the AA criterion for two triangles to be similar.</p> | <ul style="list-style-type: none"> • Students will identify similar triangles and corresponding pairs of angles and corresponding pairs of sides. | <ul style="list-style-type: none"> • Classwork • Teacher Observation | <ul style="list-style-type: none"> • Corresponding Angles • Corresponding Sides | Important |

| CONTENT | STANDARD INDICATORS | SKILLS | ASSESSMENT | VOCAB | PRIORITY |
|---|--|--|--|---|-----------|
| TRIANGLES | | | | | |
| <ul style="list-style-type: none"> • Special Right Triangles ($30^\circ - 60^\circ$ and $45^\circ - 45^\circ$) | <p>G.T.11: Use special right triangles ($30^\circ - 60^\circ$ and $45^\circ - 45^\circ$) to solve real-world and mathematical problems.</p> | <ul style="list-style-type: none"> • Students will use special right triangles to solve a word problem. | <ul style="list-style-type: none"> • Classwork • Teacher Observation | <ul style="list-style-type: none"> • Special Right Triangles | Important |

GRADE LEVEL: 10

SUBJECT: INTEGRATED MATH II

DATE: 2016 – 2017

GRADING PERIOD: QUARTER 3

MASTER COPY 4/6/2017

| CONTENT | STANDARD INDICATORS | SKILLS | ASSESSMENT | VOCAB | PRIORITY |
|---|--|---|--|---|-----------|
| REAL NUMBERS AND EXPRESSIONS | | | | | |
| <ul style="list-style-type: none"> • Square roots of non-perfect square integers | AI.RNE.4: Simplify square roots of non-perfect square integers and algebraic monomials. | <ul style="list-style-type: none"> • Students will simplify square roots of non-perfect square integers. | <ul style="list-style-type: none"> • Class work • Teacher Observation | <ul style="list-style-type: none"> • Square root • Non-perfect square integers | Important |
| LINEAR EQUATIONS, INEQUALITIES, AND FUNCTIONS | | | | | |
| <ul style="list-style-type: none"> • Inequalities • Integers • Fractions • Decimals • Coefficients | AI.L.1: Understand that the steps taken when solving linear equations create new equations that have the same solution as the original. Solve fluently linear equations and inequalities in one variable with integers, fractions, and decimals as coefficients. Explain and justify each step in solving an equation, starting from the assumption that the original equation has a solution. Justify the choice of a solution method. | <ul style="list-style-type: none"> • Students will solve linear inequalities in one variable with integers and decimals as coefficients. | <ul style="list-style-type: none"> • Classwork • Teacher Observation • Quiz | <ul style="list-style-type: none"> • Inequality • Integer • Coefficients | Critical |

| CONTENT | STANDARD INDICATORS | SKILLS | ASSESSMENT | VOCAB | PRIORITY |
|---|---|--|--|---|-----------|
| LINEAR EQUATIONSS, INEQUALITIES, AND FUNCTIONS | | | | | |
| <ul style="list-style-type: none"> • Solve Equations • Coefficients | A1.L.11: Solve equations and formulas for a specified variable, including equations with coefficients represented by variables. | <ul style="list-style-type: none"> • Students will solve equations for a specified variable. | <ul style="list-style-type: none"> • Classwork • Teacher Observation | <ul style="list-style-type: none"> • Formulas • Coefficient | Important |
| LOGIC AND PROOFS | | | | | |
| <ul style="list-style-type: none"> • Structure of Axiomatic System • Undefined Terms • Definitions • Postulates • Methods of Reasoning • Theorems • Proofs | G.LP.1: Understand and describe the structure of and relationships within an axiomatic system (undefined terms, definitions, axioms and postulates, methods of reasoning, and theorems). Understand the differences among supporting evidence, counterexamples, and actual proofs. | <ul style="list-style-type: none"> • Students will describe theorems and postulates within an axiomatic system. | <ul style="list-style-type: none"> • Classwork • Teacher Observation | <ul style="list-style-type: none"> • Axiomatic System • Undefined Terms • Postulates • Methods of Reasoning • Theorems • Proofs | Important |
| <ul style="list-style-type: none"> • Angle • Perpendicular Line • Parallel Line • Line Segment • Point • Line • Plane | G.LP.2: Know precise definitions for angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, and plane. Use standard geometric notation. | <ul style="list-style-type: none"> • Students will identify angle, perpendicular line, parallel line, and line segment. | <ul style="list-style-type: none"> • Classwork • Teacher Observation | <ul style="list-style-type: none"> • Angle • Perpendicular Line • Parallel Line • Line Segment | Important |

| CONTENT | STANDARD INDICATORS | SKILLS | ASSESSMENT | VOCAB | PRIORITY |
|--|---|---|--|---|-----------|
| ANGLES AND PLANES | | | | | |
| <ul style="list-style-type: none"> • Theorems About Lines and Angles • Vertical Angles • Transversal Crosses Parallel Lines • Alternate Interior Angles • Alternate Exterior Angles • Correspond Angles • Same Side Interior Angles • Perpendicular Bisector | <p>G.PL.3: Prove and apply theorems about lines and angles, including the following: vertical angles are congruent; when a transversal crosses parallel lines, alternate interior angles are congruent, alternate exterior angles are congruent, and corresponding angles are congruent; when a transversal crosses parallel lines, same side interior angles are supplementary; and points on a perpendicular bisector of a line segment are exactly those equidistant from the endpoints of the segment.</p> | <ul style="list-style-type: none"> • Students will apply theorems about lines and angles, including vertical angles, alternate interior angles, alternate exterior angles, and corresponding angles. | <ul style="list-style-type: none"> • Classwork • Teacher Observation • Quiz | <ul style="list-style-type: none"> • Vertical Angles • Alternate Interior Angles • Alternate Exterior Angles • Corresponding Angles | Important |

| CONTENT | STANDARD INDICATORS | SKILLS | ASSESSMENT | VOCAB | PRIORITY |
|--|---|--|--|--|-----------|
| ANGLES AND PLANES | | | | | |
| <ul style="list-style-type: none"> • Parallel Lines • Slope • Perpendicular Lines • Reciprocal Slopes • Equation of Line | <p>G.PL.4: Know that parallel lines have the same slope and perpendicular lines have opposite reciprocal slopes. Determine if a pair of lines are parallel, perpendicular, or neither by comparing the slopes in coordinate graphs and in equations. Find the equation of a line, passing through a given point that is parallel or perpendicular to a given line.</p> | <ul style="list-style-type: none"> • Students will determine if a pair of lines are parallel, perpendicular, or neither by comparing slopes. • Students will find the equation of a line, passing through a given point. | <ul style="list-style-type: none"> • Classwork • Teacher Observation | | Important |
| <ul style="list-style-type: none"> • Compass • Straightedge • Congruent Segments • Angles • Angle Bisectors • Perpendicular Bisectors • Altitudes • Medians • Parallel Lines • Perpendicular Lines | <p>G.PL.5: Explain and justify the process used to construct, with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.), congruent segments and angles, angle bisectors, perpendicular bisectors, altitudes, medians, and parallel and perpendicular lines.</p> | <ul style="list-style-type: none"> • Students will use a variety of tools to construct congruent segments and angles, an angle bisector, perpendicular bisectors, parallel and perpendicular lines. | <ul style="list-style-type: none"> • Classwork • Teacher Observation | <ul style="list-style-type: none"> • Compass • Straightedge • Angle Bisectors • Perpendicular Bisector | Important |

| CONTENT | STANDARD INDICATORS | SKILLS | ASSESSMENT | VOCAB | PRIORITY |
|---|--|--|--|--|-----------|
| TRIANGLES | | | | | |
| <ul style="list-style-type: none"> • Triangle Theorem • Midpoints • Medians • Pythagorean Theorem • Isosceles Triangle Theorem | <p>G.T.1: Prove and apply theorems about triangles, including the following: measures of interior angles of a triangle sum to 180°; base angles of isosceles triangles are congruent; the segment joining midpoints of two sides of a triangle is parallel to the third side and half the length; the medians of a triangle meet at a point; a line parallel to one side of a triangle divides the other two proportionally, and conversely; the Pythagorean Theorem, using triangle similarity; and the isosceles triangle theorem and its converse.</p> | <ul style="list-style-type: none"> • Students will identify midpoints of a triangle. • Students will identify the medians of a triangle meet at a point. | <ul style="list-style-type: none"> • Classwork • Teacher Observation | <ul style="list-style-type: none"> • Triangle Theorems • Midpoints • Medians • Pythagorean Theorem • Isosceles Triangle Theorem | Important |
| <ul style="list-style-type: none"> • Triangle Congruence | <p>G.T.2: Explain how the criteria for triangle congruence (ASA, SAS, and SSS) follow from the definition of congruence in terms of rigid motions.</p> | <ul style="list-style-type: none"> • Students will identify triangle congruence (ASA, SAS, and SSS). | <ul style="list-style-type: none"> • Classwork • Teacher Observation • Quiz | <ul style="list-style-type: none"> • ASA • SAS • SSS | Important |

| CONTENT | STANDARD INDICATORS | SKILLS | ASSESSMENT | VOCAB | PRIORITY |
|---|---|---|--|---|-----------|
| TRIANGLES | | | | | |
| <ul style="list-style-type: none"> • Congruent Triangles • Compass • Straightedge | <p>G.T.3: Explain and justify the process used to construct congruent triangles with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.).</p> | <ul style="list-style-type: none"> • Students will construct congruent triangles using a variety of tools. | <ul style="list-style-type: none"> • Classwork • Teacher Observation | | Important |
| <ul style="list-style-type: none"> • Congruent and similar triangles • Real-World Problems • Triangle Sides • Perimeters of Triangles • Areas of Triangles | <p>G.T.5: Use properties of congruent and similar triangles to solve real-world and mathematical problems involving sides, perimeters, and areas of triangles.</p> | <ul style="list-style-type: none"> • Students will solve word problems using perimeter of triangles. • Students will solve word problems using area of triangles. | <ul style="list-style-type: none"> • Classwork • Teacher Observation | <ul style="list-style-type: none"> • Perimeter • Area of Triangle | Important |

| CONTENT | STANDARD INDICATORS | SKILLS | ASSESSMENT | VOCAB | PRIORITY |
|--|---|--|--|--|-----------|
| TRIANGLES | | | | | |
| <ul style="list-style-type: none"> • Distance formula • Pythagorean Theorem • Midpoints of line segment | <p>G.T.8: Develop the distance formula using the Pythagorean Theorem. Find the lengths and midpoints of line segments in one- or two-dimensional coordinate systems. Find measures of the sides of polygons in the coordinate plane; apply this technique to compute the perimeters and areas of polygons in real-world and mathematical problems.</p> | <ul style="list-style-type: none"> • Students will use the Pythagorean Theorem to solve the distance formula. | <ul style="list-style-type: none"> • Classwork • Teacher Observation | <ul style="list-style-type: none"> • Pythagorean Theorem • Distance Formula • Midpoints of line segment | Important |
| <ul style="list-style-type: none"> • Pythagorean Theorem • Real-World Problems • Right Triangles | <p>G.T.10: Use trigonometric ratios (sine, cosine and tangent) and the Pythagorean Theorem to solve real-world and mathematical problems involving right triangles.</p> | <ul style="list-style-type: none"> • Students will use the Pythagorean Theorem to solve word problems. | <ul style="list-style-type: none"> • Classwork • Teacher Observation | <ul style="list-style-type: none"> • Pythagorean Theorem | Important |
| <ul style="list-style-type: none"> • Special Right Triangles (30° - 60° and 45° - 45) | <p>G.T.11: Use special right triangles (30° - 60° and 45° - 45°) to solve real-world and mathematical problems.</p> | <ul style="list-style-type: none"> • Students will use special right triangles to solve a word problem. | <ul style="list-style-type: none"> • Classwork • Teacher Observation | | Important |

| CONTENT | STANDARD INDICATORS | SKILLS | ASSESSMENT | VOCAB | PRIORITY |
|---|--|--|--|--|-----------|
| QUADRILATERALS AND OTHER POLYGONS | | | | | |
| <ul style="list-style-type: none"> • Interior Angles of Polygons • Exterior Angles of Polygons | <p>G.QP.3: Find measures of interior and exterior angles of polygons. Explain and justify the method used.</p> | <ul style="list-style-type: none"> • Students will find the measure of interior angles of polygons. • Students will find the measure of exterior angles of polygons. | <ul style="list-style-type: none"> • Classwork • Teacher Observation | <ul style="list-style-type: none"> • Interior Angles • Exterior Angles • Polygons | Important |
| TRANSFORMATIONS | | | | | |
| <ul style="list-style-type: none"> • Geometric Descriptions of Rigid Motions • Translations • Reflections • Rotations | <p>G.TR.1: Use geometric descriptions of rigid motions to transform figures and to predict and describe the results of translations, reflections and rotations on a given figure. Describe a motion or series of motions that will show two shapes are congruent.</p> | <ul style="list-style-type: none"> • Students will describe a translation, reflections, and a rotation of a given figure. | <ul style="list-style-type: none"> • Classwork • Teacher Observation | <ul style="list-style-type: none"> • Translation • Reflection • Rotation | Important |

| CONTENT | STANDARD INDICATORS | SKILLS | ASSESSMENT | VOCAB | PRIORITY |
|---|--|---|--|--|-----------|
| TRANSFORMATIONS | | | | | |
| <ul style="list-style-type: none"> • Dilation • Properties of Dilations • Scale Factor | <p>G.TR.2: Understand a dilation takes a line not passing through the center of the dilation to a parallel line, and leaves a line passing through the center unchanged. Verify experimentally the properties of dilations given by a center and a scale factor. Understand the dilation of a line segment is longer or shorter in the ratio given by the scale factor.</p> | <ul style="list-style-type: none"> • Student will identify dilations. • Students will understand the reduction and enlargement of a line segment. | <ul style="list-style-type: none"> • Classwork • Teacher Observation | <ul style="list-style-type: none"> • Dilation • Reduction • Enlargement | Important |

GRADE LEVEL: 10

SUBJECT: INTEGRATED MATH II

DATE: 2016 – 2017

GRADING PERIOD: QUARTER 4

MASTER COPY 4/6/2017

| CONTENT | STANDARD INDICATORS | SKILLS | ASSESSMENT | VOCAB | PRIORITY |
|---|---|--|--|--|-----------|
| LINEAR EQUATIONS, INEQUALITIES, AND FUNCTIONS | | | | | |
| <ul style="list-style-type: none"> • Linear Equations • Integers • Fractions • Decimals • Coefficients | <p>AI.L.1: Understand that the steps taken when solving linear equations create new equations that have the same solution as the original. Solve fluently linear equations and inequalities in one variable with integers, fractions, and decimals as coefficients. Explain and justify each step in solving an equation, starting from the assumption that the original equation has a solution. Justify the choice of a solution method.</p> | <ul style="list-style-type: none"> • Students will solve linear equations in one variable with integers and decimals as coefficients. | <ul style="list-style-type: none"> • Classwork • Teacher Observation • Quiz | <ul style="list-style-type: none"> • Linear Equation • Integer • Coefficients | Critical |
| <ul style="list-style-type: none"> • Solve Equations • Coefficients | <p>AI.L.11: Solve equations and formulas for a specified variable, including equations with coefficients represented by variables.</p> | <ul style="list-style-type: none"> • Students will solve equations for a specified variable. | <ul style="list-style-type: none"> • Classwork • Teacher Observation | <ul style="list-style-type: none"> • Formulas • Coefficient | Important |

| CONTENT | STANDARD INDICATORS | SKILLS | ASSESSMENT | VOCAB | PRIORITY |
|---|---|---|--|---|-----------|
| QUADRATIC AND EXPONENTIAL EQUATIONS AND FUNCTIONS | | | | | |
| <ul style="list-style-type: none"> • Quadratic Equations • One Variable • Square roots • Quadratic Formula | AI.QE.4: Solve quadratic equations in one variable by inspection (e.g., for $x^2 = 49$), finding square roots, using the quadratic formula, and factoring, as appropriate to the initial form of the equation. | <ul style="list-style-type: none"> • Students will solve quadratic equations by using the quadratic formula and factoring. | <ul style="list-style-type: none"> • Classwork • Teacher Observation • Quiz | <ul style="list-style-type: none"> • Quadratic Formula • Quadratic Equations | Important |
| LOGIC AND PROOFS | | | | | |
| <ul style="list-style-type: none"> • Structure of Axiomatic System • Undefined Terms • Definitions • Postulates • Methods of Reasoning • Theorems • Proofs | G.LP.1: Understand and describe the structure of and relationships within an axiomatic system (undefined terms, definitions, axioms and postulates, methods of reasoning, and theorems). Understand the differences among supporting evidence, counterexamples, and actual proofs. | <ul style="list-style-type: none"> • Students will describe theorems and postulates within an axiomatic system. | <ul style="list-style-type: none"> • Classwork • Teacher Observation | <ul style="list-style-type: none"> • Axiomatic System • Undefined Terms • Postulates • Methods of Reasoning • Theorems • Proofs | Important |

| CONTENT | STANDARD INDICATORS | SKILLS | ASSESSMENT | VOCAB | PRIORITY |
|---|---|--|--|--|-----------|
| LOGIC AND PROOFS | | | | | |
| <ul style="list-style-type: none"> • Definitions for • Angle • Circle • Perpendicular Line • Parallel Line • Line Segment • Point • Line • Plane | G.LP.2: Know precise definitions for angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, and plane. Use standard geometric notation. | <ul style="list-style-type: none"> • Students will identify angle, circle, perpendicular line, parallel line, and line segment. | <ul style="list-style-type: none"> • Classwork • Teacher Observation | <ul style="list-style-type: none"> • Angle • Circle • Perpendicular Line • Parallel Line • Line Segment | Important |
| TRIANGLES | | | | | |
| <ul style="list-style-type: none"> • Special Right Triangles (30° - 60° and 45° - 45) | G.T.11: Use special right triangles (30° - 60° and 45° - 45°) to solve real-world and mathematical problems. | <ul style="list-style-type: none"> • Students will use special right triangles to solve a word problem. | <ul style="list-style-type: none"> • Classwork • Teacher Observation | <ul style="list-style-type: none"> • Special right triangles | Important |
| QUADRILATERALS AND OTHER POLYGONS | | | | | |
| <ul style="list-style-type: none"> • Parallelograms Theorems • Opposite angles are congruent • Diagonals of parallelogram • Rectangles | G.QP.1: Prove and apply theorems about parallelograms, including the following: opposite sides are congruent; opposite angles are congruent; the diagonals of a parallelogram bisect each other; and rectangles are parallelograms with congruent diagonals. | <ul style="list-style-type: none"> • Students will apply theorems about parallelograms. | <ul style="list-style-type: none"> • Classwork • Teacher Observation | <ul style="list-style-type: none"> • Parallelogram • Diagonal | Important |

| CONTENT | STANDARD INDICATORS | SKILLS | ASSESSMENT | VOCAB | PRIORITY |
|--|---|--|--|--|-----------|
| QUADRILATERALS AND OTHER POLYGONS | | | | | |
| <ul style="list-style-type: none"> • Quadrilaterals • Parallelograms • Rhombuses • Rectangles • Squares • Trapezoids | G.QP.2: Prove that quadrilaterals are parallelograms, rhombuses, rectangles, squares or trapezoids. Include coordinate proofs of quadrilaterals in the coordinate plane. | <ul style="list-style-type: none"> • Students will prove that quadrilaterals are parallelograms, rhombuses, rectangles, squares or trapezoids. | <ul style="list-style-type: none"> • Classwork • Teacher Observation | <ul style="list-style-type: none"> • Quadrilaterals • Parallelograms • Rhombuses • Rectangles • Squares • Trapezoids | Important |
| <ul style="list-style-type: none"> • Interior Angles of Polygons • Exterior Angles of Polygons | G.QP.3: Find measures of interior and exterior angles of polygons. Explain and justify the method used. | <ul style="list-style-type: none"> • Students will find the measure of interior angles of polygons • Students will find the measure of exterior angles of polygons | <ul style="list-style-type: none"> • Classwork • Teacher Observation | <ul style="list-style-type: none"> • Interior Angles • Exterior Angles • Polygons | Important |
| CIRCLES | | | | | |
| <ul style="list-style-type: none"> • Radius • Diameter • Arc • Measure of an arc • Chord • Congruent Circles | G.CI.1: Define, identify and use relationships among the following: radius, diameter, arc, measure of an arc, chord, secant, tangent, and congruent concentric circles. | <ul style="list-style-type: none"> • Students will identify parts of the circle. • Students will use the relationships of radius, diameter, arc, measure of an arc, chord, or congruent circles. | <ul style="list-style-type: none"> • Classwork • Teacher Observation • Quiz | <ul style="list-style-type: none"> • Radius • Diameter • Arc • Measure of an arc • Chord • Congruent Circles | Important |
| <ul style="list-style-type: none"> • Real-world problems • Measures of circumference • Areas of circles • Arc lengths and related angles | G.CI.4: Solve real-world and other mathematical problems that involve finding measures of circumference, areas of circles and sectors, and arc lengths and related angles (central, inscribed, and intersections of secants and tangents). | <ul style="list-style-type: none"> • Students will solve word problems to find measures of circumference. • Students will solve word problems to find areas of circles. • Students will solve word problems to find arc lengths and related angles. | <ul style="list-style-type: none"> • Classwork • Teacher Observation | <ul style="list-style-type: none"> • Circumference • Areas of Circles • Arc Lengths | Important |

| CONTENT | STANDARD INDICATORS | SKILLS | ASSESSMENT | VOCAB | PRIORITY |
|---|--|--|--|---|-----------|
| THREE-DIMENSIONAL SOLIDS | | | | | |
| <ul style="list-style-type: none"> • Relationships Between Faces, Edges, and Vertices • Three-Dimensional Solids | G.TS.1: Describe relationships between the faces, edges, and vertices of three-dimensional solids. Create a net for a given three-dimensional solid. Describe the three-dimensional solid that can be made from a given net (or pattern). | <ul style="list-style-type: none"> • Students will compare faces, edges, and vertices of three dimensional shape. | <ul style="list-style-type: none"> • Classwork • Teacher Observation | <ul style="list-style-type: none"> • Face • Edge • Vertices • Three dimensional shape | Important |
| <ul style="list-style-type: none"> • Symmetries of Three-Dimensional Solids | G.TS.2: Describe symmetries of three-dimensional solids. | <ul style="list-style-type: none"> • Students will describe symmetries of three-dimensional solids. | <ul style="list-style-type: none"> • Classwork • Teacher Observation | | Important |
| <ul style="list-style-type: none"> • Properties of Congruent Solids • Properties of Similar Solids • Prisms • Regular Pyramids • Cylinders • Cones • Spheres | G.TS.3: Know properties of congruent and similar solids, including prisms, regular pyramids, cylinders, cones, and spheres; solve problems involving congruent and similar solids. | <ul style="list-style-type: none"> • Students will identify congruent and similar solids. | <ul style="list-style-type: none"> • Classwork • Teacher Observation | <ul style="list-style-type: none"> • Pyramid • Cylinder • Cone • Sphere | Important |

| CONTENT | STANDARD INDICATORS | SKILLS | ASSESSMENT | VOCAB | PRIORITY |
|---|--|--|--|--|-----------|
| THREE-DIMENSIONAL SOLIDS | | | | | |
| <ul style="list-style-type: none"> • Real-World Problems • Volume • Surface area • Prisms • Cylinders • Cones • Spheres • Pyramids • Algebraic Expressions | G.TS.5: Solve real-world and other mathematical problems involving volume and surface area of prisms, cylinders, cones, spheres, and pyramids, including problems that involve algebraic expressions. | <ul style="list-style-type: none"> • Students will solve word problems using volume. • Students will solve word problems using surface area. | <ul style="list-style-type: none"> • Classwork • Teacher Observation | <ul style="list-style-type: none"> • Volume • Surface Area | Important |
| <ul style="list-style-type: none"> • Distance formula | G.TS.8: Determine the distance of a point to the origin on the three-dimensional coordinate plane using the distance formula. | <ul style="list-style-type: none"> • Students will determine the distance of a point to the origin using the distance formula. | <ul style="list-style-type: none"> • Classwork • Teacher Observation • Quiz | <ul style="list-style-type: none"> • Distance Formula | Important |