The Standards for Mathematical Practice

The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students. These practices rest on the following two sets of important “processes and proficiencies,” each of which has longstanding importance in mathematics education:

- The NCTM process standards
  - problem solving
  - reasoning and proof
  - communication
  - representation
  - connections
- The strands of mathematical proficiency specified in the National Research Council’s report “Adding It Up”
  - adaptive reasoning
  - strategic competence
  - conceptual understanding (comprehension of mathematical concepts, operations, and relations)
  - procedural fluency (skill in carrying out procedures flexibly, accurately, efficiently, and appropriately)
  - productive disposition (habitual inclination to see mathematics as sensible, useful, and worthwhile, coupled with a belief in diligence and one’s own efficacy)

1. Make sense of problems and persevere in solving them.
   Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. They consider analogous problems, and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and solve a problem. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, “Does this make sense?” They can understand the approaches of others to solving complex problems and identify correspondences between different approaches.

2. Reason abstractly and quantitatively.
   Mathematically proficient students make sense of the quantities and their relationships in problem situations. Students bring two complementary abilities to bear on problems involving quantitative relationships: the ability to decontextualize—to abstract a given situation and represent it symbolically, and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to contextualize, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meanings of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.

3. Construct viable arguments and critique the reasoning of others.
   Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They justify their conclusions, communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or made formal until later grades. Later, students learn to determine domains to which an argument applies. Students at all grades can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.
4. **Model with mathematics.**

Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.

5. **Use appropriate tools strategically.**

Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.

6. **Attend to precision.**

Mathematically proficient students try to communicate precisely to others. They try to use clear definitions in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. They are careful about specifying units of measure, and labeling axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently, express numerical answers with a degree of precision appropriate for the problem context. In the elementary grades, students give carefully formulated explanations to each other. By the time they reach high school they have learned to examine claims and make explicit use of definitions.

7. **Look for and make use of structure.**

Mathematically proficient students look closely to discern a pattern or structure. Young students, for example, might notice that three and seven more is the same amount as seven and three more, or they may sort a collection of shapes according to how many sides the shapes have. Later, students will see $7 \times 8$ equals the well-remembered $7 \times 5 + 7 \times 3$, in preparation for learning about the distributive property. In the expression $x^2 + 9x + 14$, older students can see the $14$ as $2 \times 7$ and the $9$ as $2 + 7$. They recognize the significance of an existing line in a geometric figure and can use the strategy of drawing an auxiliary line for solving problems. They also can step back for an overview and shift perspective. They can see complicated things, such as some algebraic expressions, as single objects or as being composed of several objects. For example, they can see $5 - 3(x - y)^2$ as $5$ minus a positive number times a square, and use that to realize that its value cannot be more than $5$ for any real numbers $x$ and $y$.

8. **Look for and express regularity in repeated reasoning.**

Mathematically proficient students notice if calculations are repeated, and look both for general methods and for shortcuts. Upper elementary students might notice when dividing $25$ by $11$ that they are repeating the same calculations over and over again, and conclude they have a repeating decimal. By paying attention to the calculation of slope as they repeatedly check whether points are on the line through $(1, 2)$ with slope $3$, middle school students might abstract the equation $(y - 2)/(x - 1) = 3$. Noticing the regularity in the way terms cancel when expanding $(x - 1)(x + 1)$, $(x - 1)(x^2 + x + 1)$, and $(x - 1)(x^3 + x^2 + x + 1)$ might lead them to the general formula for the sum of a geometric series. As they work to solve a problem, mathematically proficient students maintain oversight of the process, while attending to the details. They continually evaluate the reasonableness of their intermediate results.
Connecting the Standards for Mathematical Practice to the Standards for Mathematical Content

The Standards for Mathematical Practice describe ways in which developing student practitioners of the discipline of mathematics increasingly ought to engage with the subject matter as they grow in mathematical maturity and expertise throughout the elementary, middle, and high school years. Designers of curricula, assessments, and professional development should all attend to the need to connect the mathematical practices to mathematical content in mathematics instruction.

The Standards for Mathematical Content are a balanced combination of procedure and understanding. Expectations that begin with the word “understand” are often especially good opportunities to connect the practices to the content. Students who lack understanding of a topic may rely on procedures too heavily. Without a flexible base from which to work, they may be less likely to consider analogous problems, represent problems coherently, justify conclusions, apply the mathematics to practical situations, use technology mindfully to work with the mathematics, explain the mathematics accurately to other students, step back for an overview, or deviate from a known procedure to find a shortcut. In short, a lack of understanding effectively prevents a student from engaging in the mathematical practices.

In this respect, those content standards which set an expectation of understanding are potential “points of intersection” between the Standards for Mathematical Content and the Standards for Mathematical Practice. These points of intersection are intended to be weighted toward central and generative concepts in the school mathematics curriculum that most merit the time, resources, innovative energies, and focus necessary to qualitatively improve the curriculum, instruction, assessment, professional development, and student achievement in mathematics.
Integrated Math (341)                                      Term One                                                            Week 1

Common Core State Standards

The students will:

F.IF.1 Understand that a function from one set (called the domain) to another set (called the range) assigns

to each element of the domain exactly one element of the range. If \( f \) is a function and \( x \) is an element of its

domain, then \( f(x) \) denotes the output of \( f \) corresponding to the input \( x \). The graph of \( f \) is the graph of the

equation \( y = f(x) \).

F.IF.4 For a function that models a relationship between two quantities, interpret key features of graphs

and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the

relationship. Key features include: intercepts; intervals where the function is increasing, decreasing, positive,

or negative; relative maximums and minimums; symmetries; end behavior; and periodicity.

Unit One
Models of Variation and Growth

- Functions and Graphs (F.IF.1)
- Linear Models and Direct Variation (F.IF.4)

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Essential Question</th>
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<td>The students will be able to…</td>
<td>What is direct and inverse variation?</td>
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<td>- describe the graphs of functions.</td>
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<tr>
<td>- write equations of lines in slope intercept form.</td>
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<tr>
<td>- find the slope of a line.</td>
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Teacher Resources
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Integrated Math 2

- Chapter Two lessons
- Chapter Two Practice Worksheets
- Chapter Two Pre-Made Assessments
- Chapter Two Enrichment Activities
- Chapter Two Study Guide

Media and Technology Resources
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- Test ExamPro Generator
- Kuta software
- Smart exchange lessons

Assessments

Homework: To be given daily on each introduced topic.
Class Discussion: Students will be expected to be prepared for class, participate in class activities and actively engage in class discussion.
Quiz: On concepts involving Functions and Graphs
Baseline Assessment: The Baseline Assessment focused on Intermediate Algebraic and Geometric Concepts will be given the 1st week of classes.

Suggested Instructional Practices

- LTF Activity – A Transformation Story (see mathematical resources)
- Stories through Graphs
**Integrated Math (341)**  
**Term One**  
**Week 2**

### Common Core State Standards

*The students will:*

**F.IF.4** For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. *Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity.*

**F.IF.6** Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph.

### Unit One  
Models of Variation and Growth

- Linear Models and Direct Variation (**F.IF.4** and **F.IF.6**)

#### Objectives

**The students will be able to…**
- **describe** the graphs of functions.
- **write** equations of lines in slope intercept form.
- **find** the slope of a line.
- **review** direct variation and graph equations of lines in slope intercept form.
- **use** the calculator to graph linear equations in slope intercept form.

#### Essential Question

What is Direct and Inverse variation?

#### Teacher Resources

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#### Media and Technology Resources

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#### Assessments

**Homework:** To be given daily on each introduced topic.

**Class Discussion:** Students will be expected to be prepared for class, participate in class activities and actively engage in class discussion.

**Quiz:** On concepts involving Linear Models and Direct Variation

#### Suggested Instructional Practices

- **Calculator lab** on graphing linear equations
- **Note taking skills** (guided notes)
**Integrated Math (341)**  
**Term One**  
**Week 3**

### Common Core State Standards

*The students will:*

**F.LE.1B and 1C** Construct and compare linear, quadratic, and exponential models and solve problems. Distinguish between situations that can be modeled with linear functions and with exponential functions. Recognize situations in which one quantity changes at a constant rate per unit interval relative to another. Recognize situations in which a quantity grows or decays by a constant percent rate per unit interval relative to another.

**G.GMD.3** Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems.

### Unit One

**Models of Variation and Growth**

- Inverse Variation (**F.LE.1B** and **1C**)
- Surface Area and Volume of Spheres (**G.GMD.3**)

### Objectives

- **explore** situations that involve inverse variations.
- **find** the surface area and volume of spheres, and use the fact that all spheres are similar.

### Essential Question

What is Direct and Inverse variation?

### Teacher Resources

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### Media and Technology Resources

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### Assessments

**Homework:** To be given daily on each introduced topic.  
**Class Discussion:** Students will be expected to be prepared for class, participate in class activities and actively engage in class discussion.  
**Quiz:** On concepts involving Inverse Variation & Surface Areas/Volumes of Spheres

### Suggested Instructional Practices

- Review Game  
- **Note taking skills** (guided notes)
The students will:

**F.LE. 1C** Construct and compare linear, quadratic, and exponential models and solve problems. Distinguish between situations that can be modeled with linear functions and with exponential functions. Recognize situations in which a quantity grows or decays by a constant percent rate per unit interval relative to another.

### Unit One
**Models of Variation and Growth**

- Direct Variation with Powers (**F.LE. 1C**)  

#### Objectives

The students will be able to…

- **model** and **apply** relationships in which one quantity is proportional to the square or the cube of another quantity (quadratic/cubic functions).

#### Essential Question

What is Direct and Inverse variation?

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### Media and Technology Resources

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### Assessments

**Homework:** To be given daily on each introduced topic.  
**Class Discussion:** Students will be expected to be prepared for class, participate in class activities and actively engage in class discussion.  
**Test:** On concepts involving **Models of Variation and Growth**.

### Suggested Instructional Practices

- Responder Game  
- **Note taking skills** (guided notes)
### Common Core State Standards

The students will:

**A. CED.2** Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.

**A.REI.6** Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.

### Unit Two

**Systems of Linear Equations and Inequalities**

- Linear Systems and Graphs (**A. CED.2** and **A.REI.6**)

### Objectives

**The students will be able to...**

- **write** linear equations in slope intercept form given standard from.
- **graph** linear inequalities.
- **solve** systems of linear equations by graphing.

### Essential Question

What is a breakeven point?

### Teacher Resources

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### Media and Technology Resources

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### Assessments

**Homework:** To be given daily on each introduced topic.

**Class Discussion:** Students will be expected to be prepared for class, participate in class activities and actively engage in class discussion.

**Quiz:** On concepts involving **Linear Systems and Graphs**

### Suggested Instructional Practices

- Cell Phone Activity
- **Note taking skills** (guided notes)
The students will:

A. CED.2 Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.

A.REI.6 Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.

A.CED.3 Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or non-viable options in a modeling context. For example, represent inequalities describing nutritional and cost constraints on combinations of different foods.

A.REI.5 Prove that, given a system of two equations in two variables, replacing one equation by the sum of that equation and a multiple of the other produces a system with the same solutions.

### Unit Two

**Systems of Linear Equations and Inequalities**

- Solve Systems of Linear Inequalities by Graphing (A. CED.2, A.CED.3 and A.REI.6)
- Solve Linear Systems by Substitution (A.CED.3 and A.REI.5)

### Objectives

The students will be able to...

- **graph** systems of linear inequalities.
- **solve** systems of equations by substitution.

### Essential Question

What is a breakeven point?

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### Assessments

**Homework:** To be given daily on each introduced topic.  
**Class Discussion:** Students will be expected to be prepared for class, participate in class activities and actively engage in class discussion.  
**Quiz:** On concepts involving **Systems of Linear Inequalities**

### Suggested Instructional Practices

- **Note taking skills** (guided notes)
The students will:

**A.REI.5** Prove that, given a system of two equations in two variables, replacing one equation by the sum of that equation and a multiple of the other produces a system with the same solutions.

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**Unit Two**

**Systems of Linear Equations and Inequalities**

- Solve Linear Systems by Substitution (**A.REI.5**)
- Solve Linear Systems by Elimination (**A.REI.5**)

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**Assessments**

**Homework:** To be given daily on each introduced topic.

**Class Discussion:** Students will be expected to be prepared for class, participate in class activities and actively engage in class discussion.

**Quiz:** On concepts involving **Solving systems by Substitution and Elimination.**

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**Suggested Instructional Practices**

- **Note taking skills** (guided notes)
**Integrated Math (341) Term One Week 8**

### Common Core State Standards

*The students will:*

**A.REI.5** Prove that, given a system of two equations in two variables, replacing one equation by the sum of that equation and a multiple of the other produces a system with the same solutions.

### Unit Two

**Systems of Linear Equations and Inequalities**

- Solve linear systems by elimination (**A.REI.5**)

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### Assessments

**Homework:** To be given daily on each introduced topic.
**Class Discussion:** Students will be expected to be prepared for class, participate in class activities and actively engage in class discussion.
**Test:** On concepts involving **Systems of Linear Equations and Inequalities.**

### Suggested Instructional Practices

- **Note taking skills** (guided notes)
- **Review Game**
- **Systems of Inequalities Project**
The students will:

N.VM.8 Add, subtract, and multiply matrices of appropriate dimensions.

N.VM.12 Work with $2 \times 2$ matrices as transformations of the plane, and interpret the absolute value of the determinant in terms of area.

### Unit Three

**Matrices**

- Matrix Operations (N.VM.8)
- Determinants (N.VM.12)

### Objectives

The students will be able to...

- **use** matrices to represent data sets and use matrix operations (add, subtract, scalar multiply).
- **evaluate** the determinant of a $2 \times 2$ matrix.

### Essential Question

What is a breakeven point?

How can a matrix be used to display data?

### Teacher Resources

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- Chapter Three Enrichment Activities
- Chapter Three Study Guide

### Media and Technology Resources

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### Assessments

**Homework:** To be given daily on each introduced topic.

**Class Discussion:** Students will be expected to be prepared for class, participate in class activities and actively engage in class discussion.

**Quiz:** On concepts involving **Matrix Operations and Evaluating Determinants.**

### Suggested Instructional Practices

- **Note taking skills** (guided notes)
- **LTF Road Trip Activity**
### Integrated Math (341)  Term Two  Week 2

**Common Core State Standards**

The students will:

N.VM.12 Work with $2 \times 2$ matrices as transformations of the plane, and interpret the absolute value of the determinant in terms of area.

**Unit Three**

**Matrices**

- Determinants (N.VM.12)
- Cramer’s Rule (N.VM.12)

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<td>- evaluate the determinant of a 2x2 matrix.</td>
<td>How can a matrix be used to display data?</td>
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<td>- use Cramer’s Rule to solve a system of linear equations.</td>
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### Assessments

**Homework:** To be given daily on each introduced topic.

**Class Discussion:** Students will be expected to be prepared for class, participate in class activities and actively engage in class discussion.

**Test:** On concepts involving **Matrices.**

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<th>Suggested Instructional Practices</th>
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<tr>
<td>- Note taking skills (guided notes)</td>
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<td>- Station Activity</td>
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### Common Core State Standards

The students will:

**F.IF.4** For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. *Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity.*

**F.BF.3** Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $k f(x)$, $f(kx)$, and $f(x + k)$ for specific values of $k$ (both positive and negative); find the value of $k$ given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. Include recognizing even and odd functions from their graphs and algebraic expressions for them.

### Unit Four
#### Properties of Parabolas

- Graphing Quadratic Functions (**F.IF.4**)
- Translating Parabolas (**F.BF.3**)

#### Objectives

**The students will be able to…**

- **graph** quadratic equations in standard form.
- **explore** translations of parabolas.

#### Essential Question

How do the coefficients of a quadratic function influence the graph; the direction it opens, its vertex, its line of symmetry, and its y-intercept?

#### Teacher Resources

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- Chapter Four lessons
- Chapter Four Practice Worksheets
- Chapter Four Pre-Made Assessments
- Chapter Four Enrichment Activities
- Chapter Four Study Guide

#### Media and Technology Resources

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- Test ExamPro Generator
- Kuta software
- Smart exchange lessons

#### Assessments

**Homework:** To be given daily on each introduced topic.  
**Class Discussion:** Students will be expected to be prepared for class, participate in class activities and actively engage in class discussion.  
**Quiz:** On concepts involving **Graphing Quadratic Equations in Standard Form.**

#### Suggested Instructional Practices

- **Note taking skills** (guided notes)
- **Quadratic Investigation**
- **Quadratic Graphing Investigation**
### Common Core State Standards

*The students will:*

**F.BF.3** Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $k f(x)$, $f(kx)$, and $f(x + k)$ for specific values of $k$ (both positive and negative); find the value of $k$ given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. Include recognizing even and odd functions from their graphs and algebraic expressions for them.

**N.RN.2** Rewrite expressions involving radicals and rational exponents using the properties of exponents.

### Unit Four

**Properties of Parabolas**

- Translating Parabolas (**F.BF.3**)
- Simplify Radicals (**N.RN.2**)

### Objectives

The students will be able to...

- **explore** translations of parabolas.
- **simplify** radicals in simple radical form.

### Essential Question

How do the coefficients of a quadratic function influence the graph; the direction it opens, its vertex, its line of symmetry, and its $y$-intercept?

### Teacher Resources

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- Chapter Four lessons
- Chapter Four Practice Worksheets
- Chapter Four Pre-Made Assessments
- Chapter Four Enrichment Activities
- Chapter Four Study Guide

### Media and Technology Resources

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- Test ExamPro Generator
- Kuta software
- Smart exchange lessons

### Assessments

**Homework:** To be given daily on each introduced topic.

**Class Discussion:** Students will be expected to be prepared for class, participate in class activities and actively engage in class discussion.

**Test:** On concepts involving Properties of Parabolas.

**Benchmark Assessment 1:** The Benchmark Assessment will focus on all Integrated Mathematics Concepts covered during the course to this point.

### Suggested Instructional Practices

- **Note taking skills** (guided notes)
### Common Core State Standards

The students will:

**A.APR.1** Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials.

**A.REI.4B** Solve quadratic equations by inspection (e.g., for \( x^2 = 49 \)), taking square roots, completing the square, the quadratic formula and factoring, as appropriate to the initial form of the equation. Recognize when the quadratic formula gives complex solutions and write them as \( a ± bi \) for real numbers \( a \) and \( b \).

### Unit Five

**Quadratic Functions and Graphs**

- Solve Quadratic Equations by the Square Root Method (**A.REI.4B**) 
- Multiply Binomials (pre-factoring topic) (**A.APR.1**) 

### Objectives

The students will be able to...

- **solve** quadratic equations by the square root method. 
- **multiply** binomial expressions.

### Essential Question

How do the coefficients of a quadratic function influence the graph; the direction it opens, its vertex, its line of symmetry, and its y-intercept?

### Teacher Resources

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- Chapter Four lessons 
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- Chapter Four Study Guide

### Media and Technology Resources

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### Assessments

**Homework:** To be given daily on each introduced topic.  
**Class Discussion:** Students will be expected to be prepared for class, participate in class activities and actively engage in class discussion.  
**Quiz:** On concepts involving **Solving Quadratics by Square Root Method & Multiplying Binomial Expressions.**

### Suggested Instructional Practices

- **Note taking skills** (guided notes)
The students will:

A.SSE.3A  Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.
Factor a quadratic expression to reveal the zeros of the function it defines.

Unit Five
Quadratic Functions and Graphs
- Greatest Common Factor (A.SSE.3A)
- Solving Quadratic Equations by Factoring (GCF, a=1) (A.SSE.3A)

Objectives
The students will be able to…

- **find** the greatest common factor of a polynomial expression.
- **solve** quadratic equations by factoring.

Essential Question
How do the coefficients of a quadratic function influence the graph; the direction it opens, its vertex, its line of symmetry, and its y-intercept?

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- Chapter Four Study Guide

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Assessments

**Homework:** To be given daily on each introduced topic.
**Class Discussion:** Students will be expected to be prepared for class, participate in class activities and actively engage in class discussion.
**Quiz:** On concepts involving *Finding GCF and Solving Quadratic Equations by Factoring.*

Suggested Instructional Practices
- **Note taking skills** (guided notes)
The students will:

A.REI.4C Demonstrate an understanding of the equivalence of factoring, completing the square, or using the quadratic formula to solve quadratic equations.

### Unit Five
**Quadratic Functions and Graphs**
- The Discriminant (A.REI.4C)
- The Quadratic Formula (A.REI.4C)

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Essential Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>The students will be able to…</td>
<td>Why does the discriminant determine the number and nature of the roots to a quadratic equation and how does it relate to the Quadratic Formula?</td>
</tr>
<tr>
<td>• use the discriminant to find the number of real solutions of a quadratic equation.</td>
<td></td>
</tr>
<tr>
<td>• use the quadratic formula to solve quadratic equations.</td>
<td></td>
</tr>
</tbody>
</table>

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### Media and Technology Resources
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- Smart exchange lessons

### Assessments
**Homework:** To be given daily on each introduced topic.
**Class Discussion:** Students will be expected to be prepared for class, participate in class activities and actively engage in class discussion.
**Quiz:** On concepts involving Using the Discriminate and Using The Quadratic Formula to Solve Quadratic Equations.

### Suggested Instructional Practices
- Note taking skills (guided notes)
## Integrated Math (341) Term Two Week 8

**Common Core State Standards**

*The students will:*

- **N.CN.1** Know there is a complex number $i$ such that $i^2 = -1$, and every complex number has the form $a + bi$ with $a$ and $b$ real.
- **N.CN.2** Use the relation $i^2 = -1$ and the commutative, associative, and distributive properties to add, subtract, and multiply complex numbers.
- **N.CN.7** Solve quadratic equations with real coefficients that have complex solutions.

- **A.REI.4** Use the method of completing the square to transform any quadratic equation in $x$ into an equation of the form $(x - p)^2 = q$ that has the same solutions. Derive the quadratic formula from this form.

### Unit Five

**Quadratic Functions and Graphs**

- The Quadratic Formula (N.CN.7 and A.REI.4)
- Complex Numbers (N.CN.1 and N.CN.2)

### Objectives

The students will be able to...

- **use** the quadratic formula to solve quadratic equations.
- **perform** operations with complex numbers.
- **use** the quadratic formula to solve quadratic equations with complex solutions.

### Essential Question

Why does the discriminant determine the number and nature of the roots to a quadratic equation and how does it relate to the Quadratic Formula?

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### Media and Technology Resources

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- Kuta software
- Smart exchange lessons

### Assessments

**Homework:** To be given daily on each introduced topic.

**Class Discussion:** Students will be expected to be prepared for class, participate in class activities and actively engage in class discussion

**Test:** On concepts involving *Quadratic Functions and Graphs.*

**Mid-Year Exam:** This will cover all of the concepts from semester.

### Suggested Instructional Practices

- **Note taking skills** (guided notes)
- **Review for Midyear Exam**
- **LTF Quadratic Activity**
The students will:

N.RN.1 Explain how the definition of the meaning of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation for radicals in terms of rational exponents. For example, we define $5^{1/3}$ to be the cube root of 5 because we want $(5^{1/3})^3 = 5^{(1/3)\times3}$ to hold, so $(5^{1/3})^3$ must equal 5.

N.RN.2 Rewrite expressions involving radicals and rational exponents using the properties of exponents.

## Unit Six
### Polynomial and Rational Functions
- Polynomial and Rational Models (N.RN.1)
- Power and Quotient Rules (EXPONENTS) (N.RN.2)

<table>
<thead>
<tr>
<th>Objectives</th>
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</thead>
<tbody>
<tr>
<td>The students will be able to…</td>
<td>How do you know when a rational expression can be simplified?</td>
</tr>
<tr>
<td><strong>classify</strong> expressions as polynomial or rational.</td>
<td>How can you check your answers when multiplying monomials to be certain you used each property correctly?</td>
</tr>
<tr>
<td><strong>use</strong> rules of exponents to simplify expressions.</td>
<td></td>
</tr>
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- Chapter Nine Study Guide

### Media and Technology Resources
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- Test ExamPro Generator
- Kuta software
- Smart exchange lessons

### Assessments
**Homework:** To be given daily on each introduced topic.
**Class Discussion:** Students will be expected to be prepared for class, participate in class activities and actively engage in class discussion.
**Quiz:** On concepts involving Polynomial and Rational Models & Exponents.

### Suggested Instructional Practices
- **Note taking skills** (guided notes)
- **Responder Game**
Common Core State Standards

**N.RN.1** Explain how the definition of the meaning of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation for radicals in terms of rational exponents. *For example, we define \(5^{1/3}\) to be the cube root of 5 because we want \((5^{1/3})^3 = 5^{(1/3) \times 3}\) to hold, so \((5^{1/3})^3\) must equal 5.*

**N.RN.2** Rewrite expressions involving radicals and rational exponents using the properties of exponents.

**A.REI.2** Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise.

### Unit Six
**Polynomial and Rational Functions**
- Power and Quotient Rules (exponents) (**N.RN.1** and **N.RN.2**)
- Solving Rational Equations (**A.REI.2**)

#### Objectives
The students will be able to...
- **use** rules of exponents to simplify expressions.
- **solve** rational equations (cross products, LCM).

#### Essential Question
How do you know when a rational expression can be simplified?

What is the process for solving equations with rational expressions?

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- Smart exchange lessons

### Assessments
**Homework:** To be given daily on each introduced topic.
**Class Discussion:** Students will be expected to be prepared for class, participate in class activities and actively engage in class discussion.
**Quiz:** On concepts involving Exponents.
The students will:

A.REI.2  Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise.

### Unit Six
**Polynomial and Rational Functions**
- Solving Rational Equations (A.REI.2)

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<tbody>
<tr>
<td>The students will be able to…</td>
<td>How do you know when a rational expression can be simplified?</td>
</tr>
<tr>
<td>- solve rational equations (cross products, LCM)</td>
<td>What is the process for solving equations with rational expressions?</td>
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</tbody>
</table>

### Assessments
- **Homework:** To be given daily on each introduced topic.
- **Class Discussion:** Students will be expected to be prepared for class, participate in class activities and actively engage in class discussion.
- **Quiz:** On concepts involving **Solving Rational Equations.**
- **Test:** On concepts involving **Polynomial and Rational Functions.**

### Suggested Instructional Practices
- **Note taking skills** (guided notes)
- **Robot Activity**
Integrated Math (341)  Term Three  Week 4

### Common Core State Standards

**The students will:**

**G.CO.11** Prove theorems about parallelograms. Theorems include: opposite sides are congruent, opposite angles are congruent, the diagonals of a parallelogram bisect each other, and conversely, rectangles are parallelograms with congruent diagonals.

**G.GPE.7** Use coordinates to compute perimeters of polygons and areas of triangles and rectangles, e.g., using the distance formula.

### Unit Seven

**Coordinate Geometry and Quadrilaterals**

- Quadrilaterals (**G.CO.11**)
- The Distance Formula and Quadrilaterals (**G.CO.11** and **G.GPE.7**)

### Objectives

The students will be able to...

- **describe** characteristics of quadrilaterals and develop classification skills.
- **use** formulas for distance and slope between two points to show relationships in quadrilaterals.

### Essential Question

How is coordinate geometry and deductive reasoning used to verify properties of quadrilaterals?

### Teacher Resources

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- Chapter Five lessons
- Chapter Five Practice Worksheets
- Chapter Five Pre-Made Assessments
- Chapter Five Enrichment Activities
- Chapter Five Study Guide

### Media and Technology Resources

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- Kuta software
- Smart exchange lessons

### Assessments

**Homework:** To be given daily on each introduced topic.

**Class Discussion:** Students will be expected to be prepared for class, participate in class activities and actively engage in class discussion.

**Quiz:** On concepts involving **Distance Formula & Characteristics of Quadrilaterals**.

**Benchmark Assessment 2:** The **Benchmark Assessment** will focus on all **Integrated Mathematics Concepts** covered during the course of this point.

### Suggested Instructional Practices

- **Note taking skills** (guided notes)
**Integrated Math (341) Term Three Week 5**

**Common Core State Standards**

The students will:

**G.CO.5** Given a geometric figure and a rotation, reflection, or translation, draw the transformed figure using, e.g., graph paper, tracing paper, or geometry software. Specify a sequence of transformations that will carry a given figure onto another.

**G.GPE.6** Find the point on a directed line segment between two given points that partitions the segment in a given ratio.

**Unit Seven Coordinate Geometry and Quadrilaterals**

- Midpoints (**G.GPE.6**)
- Coordinates and Transformations (**G.CO.5**)

**Objectives**
The students will be able to…

- *use* a formula to find the midpoint of a segment.
- *transform* geometric figures and learn how transformations affect their properties. (translations, rotations, reflections)

**Essential Question**
How can a coordinate grid be used to model and describe the results of various transformations?

**Teacher Resources**
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- Chapter Five lessons
- Chapter Five Practice Worksheets
- Chapter Five Pre-Made Assessments
- Chapter Five Enrichment Activities
- Chapter Five Study Guide

**Media and Technology Resources**
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- Smart exchange lessons

**Assessments**

**Homework:** To be given daily on each introduced topic.

**Class Discussion:** Students will be expected to be prepared for class, participate in class activities and actively engage in class discussion.

**Quiz:** On concepts involving **Midpoints.**

**Suggested Instructional Practices**

- Note taking skills (guided notes)
- Midpoint Investigation
**Integrated Math (341)** | **Term Three** | **Week 6**
---|---|---

**Common Core State Standards**

*The students will:*

**G.C.0.5** Given a geometric figure and a rotation, reflection, or translation, draw the transformed figure using, e.g., graph paper, tracing paper, or geometry software. Specify a sequence of transformations that will carry a given figure onto another.

### Unit Seven

**Coordinate Geometry and Quadrilaterals**

- Coordinates and Transformations (*G.C.0.5*)

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<th><strong>Objectives</strong></th>
<th><strong>Essential Question</strong></th>
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</thead>
<tbody>
<tr>
<td><strong>The students will be able to...</strong></td>
<td><strong>How can a coordinate grid be used to model and describe the results of various transformations?</strong></td>
</tr>
<tr>
<td><strong>transform</strong> geometric figures and <strong>learn</strong> how transformations affect their properties. (translations, rotations, reflections)</td>
<td></td>
</tr>
</tbody>
</table>

### Teacher Resources

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  - Chapter Five Study Guide

### Media and Technology Resources

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### Assessments

**Homework:** To be given daily on each introduced topic.

**Class Discussion:** Students will be expected to be prepared for class, participate in class activities and actively engage in class discussion.

**Quiz:** On concepts involving **Coordinates and Transformations**.

**Test:** On concepts involving **Coordinate Geometry and Quadrilaterals**.

### Suggested Instructional Practices

- **Note taking skills** (guided notes)
- **Transformation Cat Activity**
### Common Core State Standards

**G.CO.9** Prove theorems about lines and angles. *Theorems include:* vertical angles are congruent; when a transversal crosses parallel lines, alternate interior angles are congruent and corresponding angles are congruent; points on a perpendicular bisector of a line segment are exactly those equidistant from the segment’s endpoints.

### Unit Eight

#### Angle Relationships and Transversals

- **Angle Relationships** (**G.CO.9**)  
- **Transversals** (**G.CO.9**)  

### Objectives

- **use** properties of complementary and supplementary angles, linear pairs, vertical angles and angle addition  
- **learn** angle relationships formed by parallel lines and a transversal  
- **solve** problems involving angles formed by transversals

### Essential Question

What are the relationships of the angles formed by a transversal?

### Teacher Resources

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  - Integrated Math 2
- Chapter Seven lessons  
- Chapter Seven Practice Worksheets  
- Chapter Seven Pre-Made Assessments  
- Chapter Seven Enrichment Activities  
- Chapter Seven Study Guide

### Media and Technology Resources

- Test ExamPro Generator  
- Kuta software  
- Smart exchange lessons

### Assessments

- **Homework:** To be given daily on each introduced topic.  
- **Class Discussion:** Students will be expected to be prepared for class, participate in class activities and actively engage in class discussion.  
- **Quiz:** On concepts involving Angle Relationships.

### Suggested Instructional Practices

- **Note taking skills** (guided notes)  
- **Investigation – Transversal measures and parallel lines**
The students will:

G.CO.9 Prove theorems about lines and angles. Theorems include: vertical angles are congruent; when a transversal crosses parallel lines, alternate interior angles are congruent and corresponding angles are congruent; points on a perpendicular bisector of a line segment are exactly those equidistant from the segment’s endpoints.

Unit Eight
Angle Relationships and Transversals

- Transversals (G.CO.9)

<table>
<thead>
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<tr>
<td>The students will be able to…</td>
<td></td>
</tr>
<tr>
<td>learn angle relationships formed by parallel lines and a transversal</td>
<td>What are the relationships of the angles formed by a transversal?</td>
</tr>
<tr>
<td>solve problems involving angles formed by transversals</td>
<td></td>
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</tbody>
</table>

**Teacher Resources**
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- Chapter Seven/Eight lessons
- Chapter Seven/Eight Practice Worksheets
- Chapter Seven/Eight Pre-Made Assessments
- Chapter Seven/Eight Enrichment Activities
- Chapter Seven/Eight Study Guide

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- Test ExamPro Generator
- Kuta software
- Smart exchange lessons

**Assessments**

**Homework:** To be given daily on each introduced topic.
**Class Discussion:** Students will be expected to be prepared for class, participate in class activities and actively engage in class discussion.
**Test:** On concepts involving Angle Relationships and Transversals.

**Suggested Instructional Practices**

- Note taking skills (guided notes)
- Review for Benchmark
- Triangle Sum Challenge Problems
Common Core State Standards

The students will:

G.CO.10 Prove theorems about triangles. *Theorems include: measures of interior angles of a triangle sum to 180 degrees; 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.*

G.SRT.2 Given two figures, 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.

G.SRT.3 Use the properties of similarity transformations to establish the Angle-Angle criterion (AA) for two triangles to be similar.

G.SRT.4 Prove theorems about triangles. *Theorems include: a line parallel to one side of a triangle divides the other two proportionally, and conversely; the Pythagorean Theorem proved using triangle similarity.*

G.SRT.5 Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures.

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<tr>
<th>Unit Nine</th>
<th>Similar and Congruent Triangles</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Triangle Sum Theorem (G.CO.10)</td>
<td></td>
</tr>
<tr>
<td>• Similar Triangles (G.SRT.2, G.SRT.3, G.SRT.4 and G.SRT.5)</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Essential Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>The students will be able to…</td>
<td>What is the sum of the interior angles of a triangle?</td>
</tr>
<tr>
<td>• apply the triangle sum theorem and quadrilateral sum theorem to numerical problems</td>
<td>How are the concepts of similarity and congruence related to each other?</td>
</tr>
<tr>
<td>• apply the properties of similar triangles (ratios/proportions)</td>
<td></td>
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</tbody>
</table>

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<tr>
<th>Assessments</th>
<th>Suggested Instructional Practices</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Homework:</strong> To be given daily on each introduced topic.</td>
<td>• Note taking skills (guided notes)</td>
</tr>
<tr>
<td><strong>Class Discussion:</strong> Students will be expected to be prepared for class, participate in class activities and actively engage in class discussion.</td>
<td>• Station Activity</td>
</tr>
<tr>
<td><strong>Quiz:</strong> On concepts involving <strong>Triangle Sum Theorem.</strong></td>
<td></td>
</tr>
</tbody>
</table>
Integrated Math (341)  Term Four  Week 2

**Common Core State Standards**

*The students will:*

**G.SRT.4** Prove theorems about triangles. *Theorems include: a line parallel to one side of a triangle divides the other two proportionally, and conversely; the Pythagorean Theorem proved using triangle similarity.*

**G.SRT.5** Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures.

**G.CO.6** Use geometric descriptions of rigid motions to transform figures and to predict the effect of a given rigid motion on a given figure; given two figures, use the definition of congruence in terms of rigid motions to decide if they are congruent.

**G.CO.7** Use the definition of congruence in terms of rigid motions to show that two triangles are congruent if and only if corresponding pairs of sides and corresponding pairs of angles are congruent.

---

**Unit Nine**

**Similar and Congruent Triangles**

- Similar Triangles (*G.SRT.2, G.SRT.3, G.SRT.4 and G.SRT.5*)
- Congruent Triangles (*G.SRT.5, G.CO.6 and G.CO.7*)

---

**Objectives**

The students will be able to...

- **apply** the properties of similar triangles (ratios/proportions)
- **prove** triangles are similar
- **use** properties of congruent triangles

---

**Essential Question**

How are the concepts of similarity and congruence related to each other?

---

**Teacher Resources**

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- Chapter Eight lessons
- Chapter Eight Practice Worksheets
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- Chapter Eight Enrichment Activities
- Chapter Eight Study Guide

**Media and Technology Resources**

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**Assessments**

**Homework:** To be given daily on each introduced topic.

**Class Discussion:** Students will be expected to be prepared for class, participate in class activities and actively engage in class discussion.

**Quiz:** On concepts involving **Similar Triangles.**

**Suggested Instructional Practices**

- **Note taking skills** (guided notes)
- **Pre-Activity:** Measuring Angles with Protractor
- **SSS Activity**
- **SAS Activity**
The students will:

**G.CO.8** Explain how the criteria for triangle congruence (ASA, SAS, and SSS) follow from the definition of congruence in terms of rigid motions.

**Unit Nine**

**Similar and Congruent Triangles**
- Congruent Triangles Theorems (SSS, SAS, ASA, AAS) (*G.CO.8*)

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<tbody>
<tr>
<td>The students will be able to...</td>
<td>How are the concepts of similarity and congruence related to each other?</td>
</tr>
<tr>
<td>• use shortcuts to prove triangles are congruent SSS, SAS, ASA, AAS</td>
<td></td>
</tr>
</tbody>
</table>

**Teacher Resources**

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Integrated Math 2
- Chapter Eight lessons
- Chapter Eight Practice Worksheets
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- Chapter Eight Enrichment Activities
- Chapter Eight Study Guide

**Media and Technology Resources**

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**Assessments**

**Homework:** To be given daily on each introduced topic.

**Class Discussion:** Students will be expected to be prepared for class, participate in class activities and actively engage in class discussion.

**Quiz:** On concepts involving **Congruent Triangle Theorems.**

<table>
<thead>
<tr>
<th>Suggested Instructional Practices</th>
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<tbody>
<tr>
<td>• Note taking skills (guided notes)</td>
</tr>
<tr>
<td>• SSS Activity</td>
</tr>
<tr>
<td>• SAS Activity</td>
</tr>
</tbody>
</table>
### Integrated Math (341)  
**Term Four**  
**Week 4**

**Common Core State Standards**

*The students will:*

**G.CO.10** Prove theorems about triangles. *Theorems include: measures of interior angles of a triangle sum to 180 degrees; 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.*

### Unit Nine  
Similar and Congruent Triangles
- Isosceles and Equilateral Triangles (G.CO.10)

### Objectives

**The students will be able to…**

- **apply** properties of isosceles and equilateral triangles.

### Essential Question

How are isosceles and equilateral triangles alike and different?

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### Assessments

**Homework:** To be given daily on each introduced topic.  
**Class Discussion:** Students will be expected to be prepared for class, participate in class activities and actively engage in class discussion.  
**Test:** On concepts involving Similar and Congruent Triangles.  
**Benchmark Assessment 3:** The Benchmark Assessment will focus on all Integrated Mathematics Concepts covered during to this point.

### Suggested Instructional Practices

- **Note taking skills** (guided notes)  
- **Isosceles and Equilateral Triangle Investigation**
The students will:

**G.SRT.8** Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems.

**Unit Ten**
Right Triangles

- Pythagorean Theorem (**G.SRT.8**)
- Converse of the Pythagorean Theorem (classify triangles) (**G.SRT.8**)

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Essential Question</th>
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</thead>
<tbody>
<tr>
<td><strong>The students will be able to…</strong></td>
<td>How can the Pythagorean theorem be used to classify a triangle?</td>
</tr>
<tr>
<td>• use the properties of the Pythagorean Theorem to find the missing side of a right triangle.</td>
<td></td>
</tr>
<tr>
<td>• use the converse of the Pythagorean Theorem to classify triangles as acute, obtuse or right.</td>
<td></td>
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**Assessments**

**Homework:** To be given daily on each introduced topic.

**Class Discussion:** Students will be expected to be prepared for class, participate in class activities and actively engage in class discussion

**Quiz:** On concepts involving **Pythagorean Theorem and Its Converse.**

**Suggested Instructional Practices**
- Note taking skills (guided notes)
- Test Taking Strategies for Final Exam

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**Common Core State Standards**

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**Integrated Math (341) Term Four Week 5**

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**Integrated Math (341) ~ Term Four ~ Week 6**

### Common Core State Standards

*The students will:*

**G.SRT.4** Prove theorems about triangles. *Theorems include: a line parallel to one side of a triangle divides the other two proportionally, and conversely; the Pythagorean Theorem proved using triangle similarity.*

### Unit Ten

**Right Triangles**

- Special Right Triangles (**G.SRT.4**)

### Objectives

**The students will be able to…**

- **apply** special right triangle properties 45-45-90, 30-60-90.

### Essential Question

How do you identify and use special right triangles?

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### Assessments

**Homework:** To be given daily on each introduced topic.

**Class Discussion:** Students will be expected to be prepared for class, participate in class activities and actively engage in class discussion.

**Quiz:** On concepts involving **Special Right Triangles**.

### Suggested Instructional Practices

- **Note taking skills** (guided notes)
- **Test Taking Strategies for Final Exam**
### Common Core State Standards

**G.SRT. 6** Understand that by similarity, side ratios in right triangles are properties of the angles in the triangle, leading to definitions of trigonometric ratios for acute angles.

**G.SRT.8** Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems.

## Unit Ten
### Right Triangles

- **Right Triangle Trigonometry** (*G.SRT. 6* and *G.SRT.8*)

## Objectives

**The students will be able to...**

- **find** trigonometric ratios in right triangles
- **use** right triangle trigonometric ratios to solve a right triangle (find missing sides and angles)

## Essential Question

How do you use right triangle trigonometry ratios to find missing sides and angles of right triangles?

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## Assessments

**Homework:** To be given daily on each introduced topic.

**Class Discussion:** Students will be expected to be prepared for class, participate in class activities and actively engage in class discussion.

**Quiz:** On concepts involving **Right Triangle Trigonometry.**

## Suggested Instructional Practices

- **Note taking skills** (guided notes)
- **Test Taking Strategies for Final Exam**
**Integrated Math (341)**

**Term Four**

**Week 8**

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**G.SRT. 6** Understand that by similarity, side ratios in right triangles are properties of the angles in the triangle, leading to definitions of trigonometric ratios for acute angles.

**G.SRT.8** Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems.

### Unit Ten

**Right Triangles**

- Right Triangle Trigonometry (*G.SRT. 6* and *G.SRT.8*)

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<td>• use right triangle trigonometric ratios to solve a right triangle (find missing sides and angles)</td>
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