

Mathematics

Grade Level Expectations at a Glance

Standard	Grade Level Expectation
Seventh Grade	
1. Number Sense, Properties, and Operations	<ol style="list-style-type: none"> 1. Proportional reasoning involves comparisons and multiplicative relationships among ratios 2. Formulate, represent, and use algorithms with rational numbers flexibly, accurately, and efficiently
2. Patterns, Functions, and Algebraic Structures	<ol style="list-style-type: none"> 1. Properties of arithmetic can be used to generate equivalent expressions 2. Equations and expressions model quantitative relationships and phenomena
3. Data Analysis, Statistics, and Probability	<ol style="list-style-type: none"> 1. Statistics can be used to gain information about populations by examining samples 2. Mathematical models are used to determine probability
4. Shape, Dimension, and Geometric Relationships	<ol style="list-style-type: none"> 1. Modeling geometric figures and relationships leads to informal spatial reasoning and proof 2. Linear measure, angle measure, area, and volume are fundamentally different and require different units of measure

From the Common State Standards for Mathematics, Page 46.

Mathematics | Grade 7

In Grade 7, instructional time should focus on four critical areas: (1) developing understanding of and applying proportional relationships; (2) developing understanding of operations with rational numbers and working with expressions and linear equations; (3) solving problems involving scale drawings and informal geometric constructions, and working with two- and three-dimensional shapes to solve problems involving area, surface area, and volume; and (4) drawing inferences about populations based on samples.

(1) Students extend their understanding of ratios and develop understanding of proportionality to solve single- and multi-step problems. Students use their understanding of ratios and proportionality to solve

a wide variety of percent problems, including those involving discounts, interest, taxes, tips, and percent increase or decrease. Students solve problems about scale drawings by relating corresponding lengths between the objects or by using the fact that relationships of lengths within an object are preserved in similar objects. Students graph proportional relationships and understand the unit rate informally as a measure of the steepness of the related line, called the slope. They distinguish proportional relationships from other relationships.

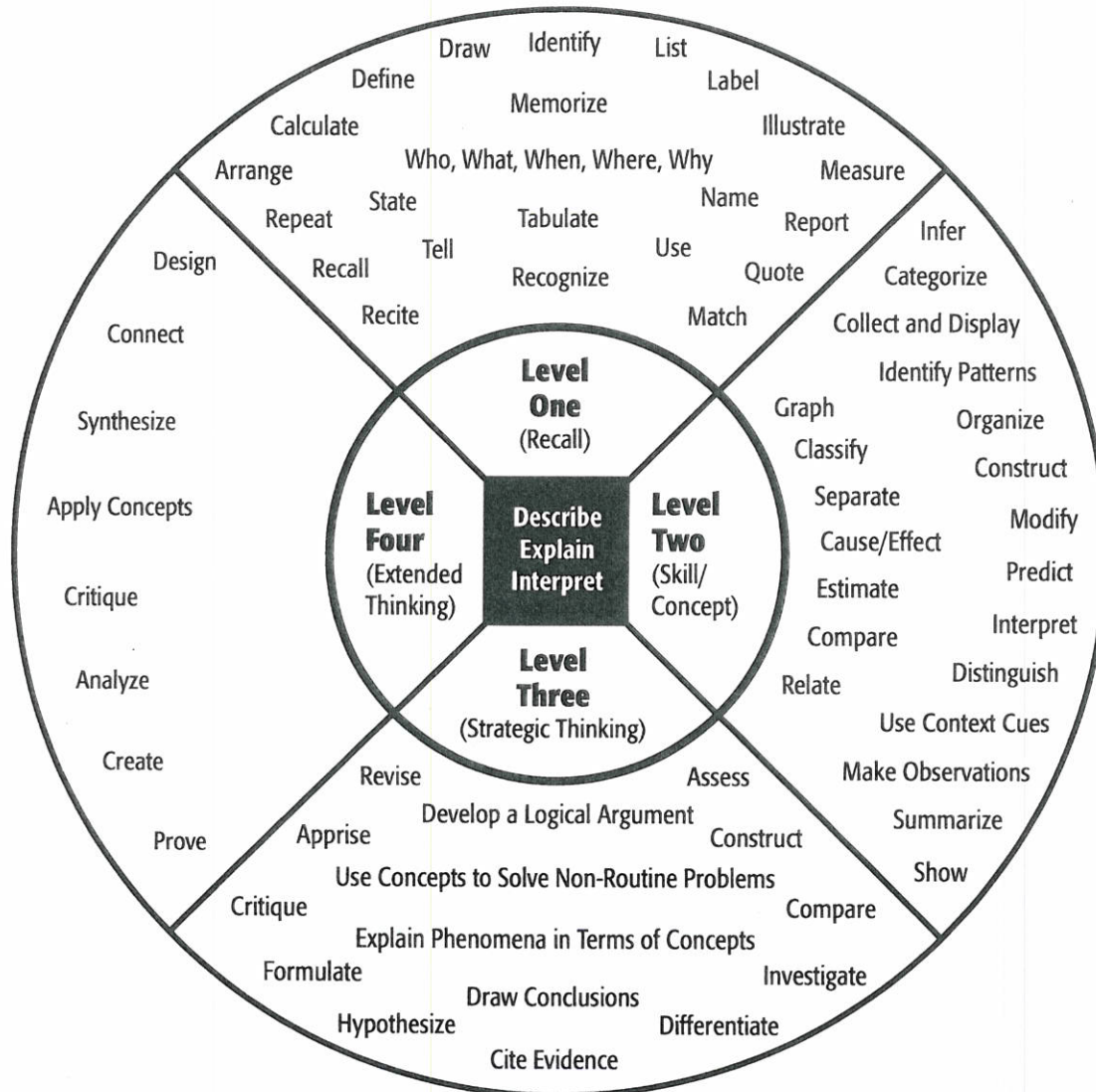
(2) Students develop a unified understanding of number, recognizing fractions, decimals (that have a finite or a repeating decimal representation), and percents as different representations of rational numbers. Students extend addition, subtraction, multiplication, and division to all rational numbers, maintaining the properties of operations and the relationships between addition and subtraction, and multiplication and division. By applying these properties, and by viewing negative numbers in terms of everyday contexts (e.g., amounts owed or temperatures below zero), students explain and interpret the rules for adding, subtracting, multiplying, and dividing with negative numbers. They use the arithmetic of rational numbers as they formulate expressions and equations in one variable and use these equations to solve problems.

(3) Students continue their work with area from Grade 6, solving problems involving the area and circumference of a circle and surface area of three-dimensional objects. In preparation for work on congruence and similarity in Grade 8 they reason about relationships among two-dimensional figures

using scale drawings and informal geometric constructions, and they gain familiarity with the relationships between angles formed by intersecting lines. Students work with three-dimensional figures, relating them to two-dimensional figures by examining cross-sections. They solve real-world and mathematical problems involving area, surface area, and volume of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes and right prisms.

(4) Students build on their previous work with single data distributions to compare two data distributions and address questions about differences between populations. They begin informal work with random sampling to generate data sets and learn about the importance of representative samples for drawing inferences.

Depth of Knowledge (DOK) Levels



Level One Activities	Level Two Activities	Level Three Activities	Level Four Activities
Recall elements and details of story structure, such as sequence of events, character, plot and setting.	Identify and summarize the major events in a narrative.	Support ideas with details and examples.	Conduct a project that requires specifying a problem, designing and conducting an experiment, analyzing its data, and reporting results/ solutions.
Conduct basic mathematical calculations.	Use context cues to identify the meaning of unfamiliar words.	Use voice appropriate to the purpose and audience.	Apply mathematical model to illuminate a problem or situation.
Label locations on a map.	Solve routine multiple-step problems.	Identify research questions and design investigations for a scientific problem.	Analyze and synthesize information from multiple sources.
Represent in words or diagrams a scientific concept or relationship.	Describe the cause/effect of a particular event.	Develop a scientific model for a complex situation.	Describe and illustrate how common themes are found across texts from different cultures.
Perform routine procedures like measuring length or using punctuation marks correctly.	Identify patterns in events or behavior.	Determine the author's purpose and describe how it affects the interpretation of a reading selection.	Design a mathematical model to inform and solve a practical or abstract situation.
Describe the features of a place or people.	Formulate a routine problem given data and conditions.	Apply a concept in other contexts.	
	Organize, represent and interpret data.		

MATH 7 Unit 2: Modeling with Expressions, Equations, and Inequalities (29-38 days)

How can we represent quantities in a different way?

Students develop understanding of and work with expressions and linear equations.

Students will formulate expressions, equations, and inequalities in order to develop and solidify understanding of equivalence. They will use properties of operations to generate equivalent expressions. They will also demonstrate that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related.

<p>Previous Learning <u>Math 6</u> - Whole number exponents; greatest common factor; expressions; one-step equations; inequalities.</p>	<p>Future Learning <u>Math 8</u>: Properties of integer exponents; slope; functions; linear equations.</p>
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****Not all of the content in a given grade is emphasized equally in the standards. Some clusters require greater emphasis than the others based on the depth of the ideas, the time that they take to master, and/or their importance to future mathematics or the demands of college and career readiness. To say that some things have greater emphasis is not to say that anything in the standards can safely be neglected in instruction. Neglecting material will leave gaps in student skill and understanding and may leave students unprepared for the challenges of a later grade. All standards are eligible for inclusion on the CMAS/PARCC assessment. Major Clusters will be a majority of the assessment, Supporting Clusters will be assessed through their success at supporting the Major Clusters and Additional Clusters will be assessed as well. The assessments will strongly focus where the standards strongly focus.**

Major Clusters	Supporting Clusters	Additional Clusters	Mathematical Practices
<p><input checked="" type="checkbox"/> 7.EE.A Use properties of operations to generate equivalent expressions.</p> <p><input checked="" type="checkbox"/> 7.EE.B Solve real-life and mathematical problems using numerical and algebraic expressions and equations.</p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/> MP2 Reason abstractly and quantitatively.</p> <p><input type="checkbox"/> MP4 Model with mathematics.</p> <p><input type="checkbox"/> MP6 Attend to precision.</p> <p><input type="checkbox"/> MP7 Look for and make use of structure.</p>

Bundles:	Standards:	Possible Learning Targets:	Instructional Supports
Using Equivalent Expressions	<p>Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients (CCSS:7.EE.A.1)</p> <p>Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related. (CCSS:7.EE.A.2)</p>	<p>I can use the properties of operations to solve linear expressions with rational coefficients.</p> <p>I can rewrite an expression in different forms to help me understand and solve problems.</p>	<p>Big Ideas 2013 RED ACCELERATED (skateboard): 5b</p> <p>Big Ideas 2014 RED ACCELERATED (online)(infinity):: 3.1, 3.2, Extension 3.2 Ticket to Ride(Illustrative Mathematics):equivalent expressions. Miles to Kilometers(Illustrative Mathematics):equivalent expressions.</p>
Modeling Linear Situations with Equations or Inequalities	<p>Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies.(CCSS:7.EE.B.3)</p>	<p>I can use properties of operations to analyze and solve problems with rational numbers in any form (whole numbers, fractions, and decimals).</p> <p>I can convert between whole numbers, fractions and decimals.</p> <p>I can estimate and compute in my head to determine whether an answer makes sense.</p>	<p>Anna in D.C.(Illustrative Mathematics):multi-step percent problem.</p> <p>Modeling: Hot and Cold(MARS Problem Solving Lesson):convert temperatures and assess the reasonableness.</p>
Solving Equations & Inequalities with Fluency	<p>Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.</p> <p>a. Solve word problems leading to equations of the form $px + q = r$ and $p(x + q) = r$, where p, q, and r are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach.(CCSS:7.EE.4.a)</p> <p>b. Solve word problems leading to inequalities of the form $px + q > r$ or $px + q < r$, where p, q, and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem.(CCSS:7.EE.4.b)</p>	<p>I can write, solve, and interpret two-step equations using known and unknown values.</p> <p>I can write, solve, and interpret two-step inequalities using known and unknown values.</p> <p>I can represent the solution of an inequality graphically and algebraically.</p>	<p>Big Ideas 2013 RED ACCELERATED(skateboard): 2.4, 2.5, 2.6, 2.6b</p> <p>Big Ideas 2014 RED ACCELERATED(online)(infinity) 3.3, 3.4, 3.5, 4.1-4.4 Steps to Solving Equations(MARS Concept Development lesson) Solving Linear Equations(MARS Concept Development lesson) Inequalities Lesson(Common Core Additional Investigations) Solving One-Step Inequalities(OnCore) Solving Two-Step Inequalities (OnCore)</p>

Grade 7 - Mathematics (Math 7)
Modeling with Expressions, Equations and Inequalities (2017-18) (29 - 38 Days)
Oct - Dec

Overview

*How can we represent quantities in a different way?
Students solidify an understanding of equivalence.*

Students will formulate expressions, equations, and inequalities to develop and solidify understanding of equivalence. They will use properties of operations to generate equivalent expressions. They will also demonstrate that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related.

Standards:

- Standard 2: Patterns, Functions, and Algebraic Structures
 - GLE 1: Properties of arithmetic can be used to generate equivalent expressions
 - EO a: Use properties of operations to generate equivalent expressions. (CCSS: 7.EE)
 - EO a.i: Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients. (CCSS: 7.EE.1)
 - EO a.ii: Demonstrate that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related. (CCSS: 7.EE.2)
 - GLE 2: Equations and expressions model quantitative relationships and phenomena
 - EO b: Apply properties of operations to calculate with numbers in any form, convert between forms as appropriate, and assess the reasonableness of answers using mental computation and estimation strategies. (CCSS: 7.EE.3)
 - EO c: Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities. (CCSS: 7.EE.4)
 - EO c.i: Fluently solve word problems leading to equations of the form $px + q = r$ and $p(x + q) = r$, where p , q , and r are specific rational numbers. (CCSS: 7.EE.4a)
 - EO c.ii: Compare an algebraic solution to an arithmetic solution, identifying the sequences of the operators used in each approach. (CCSS: 7.EE.4a)
 - EO c.iii: Solve word problems leading to inequalities of the form $px + q > r$ or $px + q < r$, where p , q , and r are specific rational numbers. (CCSS: 7.EE.4b)
 - EO c.iv: Graph the solution set of the inequality and interpret it in the context of the problem. (CCSS: 7.EE.4b)
- Standard MP: Mathematical Practices
 - GLE 1: Developing mathematical practices are processes and proficiencies necessary to flexibly use skills and concepts in multiple contexts.
 - EO 1: Make sense of problems and persevere in solving them.
 - EO 2: Reason abstractly and quantitatively.
 - EO 3: Construct viable arguments and critique the reasoning of others.
 - EO 4: Model with mathematics.
 - EO 5: Use appropriate tools strategically
 - EO 6: Attend to precision
 - EO 7: Look for and make use of structure
 - EO 8: Look for and express regularity/in repeated reasoning.

Grade 7 - Mathematics (Math 7)
 Modeling with Expressions, Equations and Inequalities (2017--18) (29 - 38 Days)
 Oct - Dec

Desired Results

- Equivalence, Modeling, Problem Solving, Quantitative Reasoning,

Big Ideas:

*Major concept: cross-sub grade levels
 Focus on volume*

Overarching Understandings:

- Problem solvers use mathematical models to translate real world situations into representations that can be used to find/delend solutions.
- Any number, shape, measure, expression, or equation can be represented in an infinite number of ways that are equivalent.
- Properties that govern arithmetic and algebra are used together with notions of equivalence to solve problems.

Overarching Essential Questions:

- How do you create a model to use for problem solving?
- How can we represent (show) something a different way? Why would we want to?
- How do we know when two things are equivalent?
- What are properties in math? How do they help us?

P-12

Organizing Concepts

Expressions and Equations: Equivalent Expressions

Students will understand that...

- Rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related.
- **Mathematical Practice 7 (CCSS: MP 7):** Problem solvers look for and make use of structure.
- Variables can be used to represent quantities in any type of mathematical problem.

Students will know...

- Substitution - Evaluating algebraic expressions for given values
- Properties of real numbers: Distributive, commutative, associative, inverse, and identity
- Key vocabulary: numeric expression, equivalent expression, algebraic expression, variable, term, like terms, constant, coefficient

Essential Questions

- How are properties applied in other fields of study?
- How is it determined that two algebraic expressions are equivalent?

Students will be able to...

- Apply properties of operations as strategies to add, subtract, factor and expand linear expressions with rational coefficients. (CCSS: MP 7)
- Demonstrate that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related. (CCSS: MP 7)
- Use the distributive property to factor and expand linear expressions with rational coefficients. (CCSS: MP 7)

Grade 7 - Mathematics (Math 7)
 Modeling with Expressions, Equations and Inequalities (2017-18) (29 - 38 Days)
 Oct - Dec

Expressions and Equations: Writing and Solving Equations

Students will understand that...

- An algebraic approach can be a quicker way to solve a problem than a guess and check numeric approach.
- **Mathematical Practice 1 (CCSS: MP 1):** Problem solvers make sense of problems and persevere in solving them.
- **Mathematical Practice 2 (CCSS: MP 2):** Problem solvers reason abstractly and quantitatively.
- **Mathematical Practice 6 (CCSS: MP 6):** Problem solvers attend to precision.

Students will know...

- Procedures for translating words to equations (e.g., generalizing patterns from guess and check tables, using key vocabulary, starting with a formula, identifying extraneous information, working with a simpler problem)
- Proper algebraic procedures: vertical work, repeatedly shows inverse operations which are being done to each side of the equation, clearly solves for x , checks answer.
- Equivalent ways to solve with the distributive property (e.g., $2(x+2) = -6$ can be done by first dividing each side by 2 or by first expanding to $2x+4=-6$)
- Multiplying by $1/a$ is the same as dividing by a .
- Properties of Equality: Addition, Subtraction, Multiplication, Division

Essential Questions

- Do properties of arithmetic work with numbers or just symbols? Why?
- How are inverses used outside of mathematics?
- How can we change equations without changing the value?
- How do symbolic transformations affect an equation?
- How is it determined that two algebraic expressions are equivalent?
- Why are there different ways to solve equations?

Students will be able to...

- Use variables to represent quantities in a real-world or mathematical problems, and construct simple equations to solve problems by reasoning about the quantities. (CCSS: MP 1, 2, 6, 7)
- Fluently solve equations of the form $px + q = r$ and $px + q = r$, where p , q and r are specific rational numbers.
- Solve equations with proper algebraic procedures and reasoning based on equivalence. (CCSS: MP 1, 2, 6, 7)
- Model and solve word problems leading to equations of the form $px + q = r$ and $px + q = r$, where p , q , and r are specific rational numbers. (CCSS: MP 1, 2, 6, 7)
- Compare an algebraic solution to an arithmetic solution identifying the sequence of the operations used in each approach. (CCSS: MP 1, 2, 6, 7)

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Expressions and Equations: Inequalities

Students will understand that...

- **Mathematical Practice 5 (CCSS: MP 5):** Problem solvers use appropriate tools strategically.
- **Mathematical Practice 7 (CCSS: MP 7):** Problem solvers look for and make use of structure.
- A negative value in an inequality does not necessarily mean you must reverse the inequality symbol (i.e. $-3 < x < 10$)

Students will know...

- $a < b$ is the same as $b > a$.
- Correct format for solving equations/inequalities (i.e. work down, balance, show inverse operations, clearly solve for x , check answer).
- Effects of multiplying or dividing by a negative value in an inequality.
- Inequality number line notation: open dot, closed dot.
- Key vocabulary: coefficient, inequality, infinite
- Properties of Inequality: Addition, Subtraction, Multiplication, Division

Essential Questions

- How are Properties of Inequality different from Properties of Equality? How are they the same?
- How do symbolic transformations affect an inequality?
- Why do inequalities have multiple answers?
- Why does the inequality symbol reverse when multiplying or dividing by a negative number but not when adding and subtracting?

Students will be able to...

- Graph the solution set of an inequality on a number line and interpret it in the context of the problem. (CCSS: MP 1, 2, 5, 6, 7)
- Model and solve word problems leading to inequalities of the form $px + q > r$ or $px + q < r$, where p , q , and r are rational numbers. (CCSS: MP 1, 2, 5, 6, 7)
- Use variables to represent quantities in real-world or mathematical problems and construct inequalities to solve problems by reasoning about the quantities. (CCSS: MP 1, 2, 6, 7)

STANDARDS TEMPLATE

Content Area: NAME OF CONTENT AREA

Standard: The topical organization of an academic content area.

Prepared Graduates:

- The P-12 concepts and skills that all students who complete the Colorado education system must master to ensure their success in a postsecondary and workforce setting

High School and Grade Level Expectations

Concepts and skills students master:

Grade Level Expectation: High Schools: The articulation of the concepts and skills of a standard that indicates a student is making progress toward being a prepared graduate.

Grade Level Expectations: The articulation, at each grade level, the concepts and skills of a standard that indicates a student is making progress toward being ready for high school.

What do students need to know?

Evidence Outcomes	21st Century Skills and Readiness Competencies
Students can: Evidence outcomes are the indication that a student is meeting an expectation at the mastery level. <i>How do we know that a student can do it?</i>	Inquiry Questions: Sample questions intended to promote deeper thinking, reflection and refined understandings precisely related to the grade level expectation. Relevance and Application: Examples of how the grade level expectation is applied at home, on the job or in a real-world, relevant context. Nature of the Discipline: The characteristics and viewpoint one keeps as a result of mastering the grade level expectation.

2. Patterns, Functions, and Algebraic Structures

Pattern sense gives students a lens with which to understand trends and commonalities. Being a student of mathematics involves recognizing and representing mathematical relationships and analyzing change. Students learn that the structures of algebra allow complex ideas to be expressed succinctly.

Prepared Graduates

The prepared graduate competencies are the preschool through twelfth-grade concepts and skills that all students who complete the Colorado education system must have to ensure success in a postsecondary and workforce setting.

Prepared Graduate Competencies in the 2. Patterns, Functions, and Algebraic Structures Standard are:

- Are fluent with basic numerical and symbolic facts and algorithms, and are able to select and use appropriate (mental math, paper and pencil, and technology) methods based on an understanding of their efficiency, precision, and transparency
- Understand that equivalence is a foundation of mathematics represented in numbers, shapes, measures, expressions, and equations
- Make sound predictions and generalizations based on patterns and relationships that arise from numbers, shapes, symbols, and data
- Make claims about relationships among numbers, shapes, symbols, and data and defend those claims by relying on the properties that are the structure of mathematics
- Use critical thinking to recognize problematic aspects of situations, create mathematical models, and present and defend solutions

Content Area: Mathematics
Standard: 2. Patterns, Functions, and Algebraic Structures

Prepared Graduates:

Understand that equivalence is a foundation of mathematics represented in numbers, shapes, measures, expressions, and equations

Grade Level Expectation: Seventh Grade

Concepts and skills students master:

1. Properties of arithmetic can be used to generate equivalent expressions

Evidence Outcomes

Students can:

- a. Use properties of operations to generate equivalent expressions. (CCSS: 7.EE)
- i. Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients. (CCSS: 7.EE.1)
- ii. Demonstrate that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related. ¹ (CCSS: 7.EE.2)

21st Century Skills and Readiness Competencies

Inquiry Questions:

- 1. How do symbolic transformations affect an equation or expression?
- 2. How is it determined that two algebraic expressions are equivalent?

Relevance and Application:

- 1. The ability to recognize and find equivalent forms of an equation allows the transformation of equations into the most useful form such as adjusting the density formula to calculate for volume or mass.

Nature of Mathematics:

- 1. Mathematicians abstract a problem by representing it as an equation. They travel between the concrete problem and the abstraction to gain insights and find solutions.
- 2. Mathematicians reason abstractly and quantitatively. (MP)
- 3. Mathematicians look for and express regularity in repeated reasoning. (MP)

Content Area: Mathematics
Standard: 2. Patterns, Functions, and Algebraic Structures

Prepared Graduates:

Use critical thinking to recognize problematic aspects of situations, create mathematical models, and present and defend solutions

Grade Level Expectation: Seventh Grade

Concepts and skills students master:

2. Equations and expressions model quantitative relationships and phenomena

Evidence Outcomes

Students can:

- a. Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form,² using tools strategically. (CCSS: 7.EE.3)
- b. Apply properties of operations to calculate with numbers in any form, convert between forms as appropriate, and assess the reasonableness of answers using mental computation and estimation strategies.³ (CCSS: 7.EE.3)
- c. Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities. (CCSS: 7.EE.4)
 - i. Fluently solve word problems leading to equations of the form $px + q = r$ and $p(x + q) = r$, where $p, q,$ and r are specific rational numbers. (CCSS: 7.EE.4a)
 - ii. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach.⁴ (CCSS: 7.EE.4a)
 - iii. Solve word problems⁵ leading to inequalities of the form $px + q > r$ or $px + q < r$, where $p, q,$ and r are specific rational numbers. (CCSS: 7.EE.4b)
 - iv. Graph the solution set of the inequality and interpret it in the context of the problem. (CCSS: 7.EE.4b)

21st Century Skills and Readiness Competencies

Inquiry Questions:

- 1. Do algebraic properties work with numbers or just symbols? Why?
- 2. Why are there different ways to solve equations?
- 3. How are properties applied in other fields of study?
- 4. Why might estimation be better than an exact answer?
- 5. When might an estimate be the only possible answer?

Relevance and Application:

- 1. Procedural fluency with algebraic methods allows use of linear equations and inequalities to solve problems in fields such as banking, engineering, and insurance. For example, it helps to calculate the total value of assets or find the acceleration of an object moving at a linearly increasing speed.
- 2. Comprehension of the structure of equations allows one to use spreadsheets effectively to solve problems that matter such as showing how long it takes to pay off debt, or representing data collected from science experiments.
- 3. Estimation with rational numbers enables quick and flexible decision-making in daily life. For example, determining how many batches of a recipe can be made with given ingredients, how many floor tiles to buy with given dimensions, the amount of carpeting needed for a room, or fencing required for a backyard.

Nature of Mathematics:

- 1. Mathematicians model with mathematics. (MP)

Standard: 2. Patterns, Functions, and Algebraic Structures

Seventh Grade

- ¹ For example, $a + 0.05a = 1.05a$ means that "increase by 5%" is the same as "multiply by 1.05." (CCSS: 7.EE.2)
- ² whole numbers, fractions, and decimals. (CCSS: 7.EE.3)
- ³ For example: If a woman making \$25 an hour gets a 10% raise, she will make an additional $\frac{1}{10}$ of her salary an hour, or \$2.50, for a new salary of \$27.50. If you want to place a towel bar $9\frac{3}{4}$ inches long in the center of a door that is 27 $\frac{1}{2}$ inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation. (CCSS: 7.EE.3)
- ⁴ For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width? (CCSS: 7.EE.4a)
- ⁵ For example: As a salesperson, you are paid \$50 per week plus \$3 per sale. This week you want your pay to be at least \$100. Write an inequality for the number of sales you need to make, and describe the solutions. (CCSS: 7.EE.4b)

CHANGE THE TASK!

Change the task!

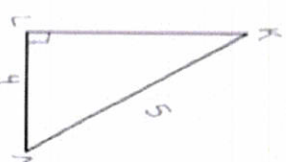
Elementary (PK-5)

$$\begin{array}{r} 27 \\ \times 16 \\ \hline \end{array}$$



High School (9-12)

Given this right triangle, solve for the missing variable.



Middle School (6-8)

If you roll a dice 72 times, how many times do you expect to roll a six?

- a)9 b)12 c)11 d)10

