

7th Grade Math Common Core Alignment Holt 2012 Course 2

Ch. 1: Algebraic Reasoning

Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.

CC.7.NS.1 Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.

- a. Describe situations in which opposite quantities combine to make 0. For example, a hydrogen atom has 0 charge because its two constituents are oppositely charged.
- b. Understand $p + q$ as the number located a distance $|q|$ from p , in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.
- c. Understand subtraction of rational numbers as adding the additive inverse, $p - q = p + (-q)$. Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.
- d. Apply properties of operations as strategies to add and subtract rational numbers.

Use properties of operations to generate equivalent expressions.

CC.7.EE.1 Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.

CC.7.EE.2 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.

For example, $a + 0.05a = 1.05a$ means that “increase by 5%” is the same as “multiply by 1.05.”

Common Core	Lesson Number & Name	Vocabulary	Learning Targets
	1-1 Order of Operations	numerical expression order of operations	I can use the order of operations to simplify numerical expressions.
CC.7.NS.1	1-2 Properties of Numbers	Commutative Property Associative Property Identity Property Distributive Property	I can identify properties of rational numbers and use them to simplify numerical expressions.
	1-3 Variables and Algebraic Expressions	variable constant algebraic expression evaluate	I can evaluate algebraic expressions.
CC.7.EE.2	1-4 Translating Words into Math		I can translate words into numbers, variables, and operations.
CC.7.EE.1	1-5 Simplifying Algebraic Expressions	term coefficient	I can simplify algebraic expressions.

Chapter 2: Integers and Rational Numbers

Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.

CC.7.NS.1 Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.

- a. Describe situations in which opposite quantities combine to make 0. For example, a hydrogen atom has 0 charge because its two constituents are oppositely charged.
- b. Understand $p + q$ as the number located a distance $|q|$ from p , in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.

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c. Understand subtraction of rational numbers as adding the additive inverse, $p - q = p + (-q)$. Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.

d. Apply properties of operations as strategies to add and subtract rational numbers.

CC.7.NS.2 Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.

a. Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as $(-1)(-1) = 1$ and the rules for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts.

b. Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If p and q are integers then $-(p/q) = (-p)/q = p/(-q)$. Interpret quotients of rational numbers by describing real-world contexts.

c. Apply properties of operations as strategies to multiply and divide rational numbers.

d. Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually repeats.

CC.7.NS.3 Solve real-world and mathematical problems involving the four operations with rational numbers.

Use properties of operations to generate equivalent expressions.

CC.7.EE.4 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.

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. For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?

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. 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.

Common Core	Lesson Number & Name	Vocabulary	Learning Targets
	2-1 Integers	opposite additive inverse integer absolute value	I can compare and order integers and determine absolute value.
CC.7.NS.1	2-2 LAB Model Integer Addition		I can use integer chips to model integer addition.
CC.7.NS.1	2-2 Adding Integers		I can add integers.
CC.7.NS.1	2-2 EXT Additive Inverses and Absolute Value		I can use the additive inverses and absolute value in real world situations.
CC.7.NS.1	2-3 LAB Model Integer Subtraction		I can use integer chips to model integer subtraction.
CC.7.NS.1	2-3 Subtracting Integers		I can subtract integers.
CC.7.NS.2	2-4 LAB Model Integer Multiplication and Division		I can use integer chips to model integer multiplication and division.
CC.7.NS.2	2-4 Multiplying and Dividing Integers		I can multiply and divide integers.
CC.7.EE.4	2-5 LAB Model Integer Equations		I can use algebra tiles to model solving integer equations.

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CC.7.EE.4	2-5 Solving Equations Containing Integers		I can solve one-step equations.
CC.7.NS.3	2-6 Equivalent Fractions and Decimals	terminating decimal repeating decimal	I can write fractions and decimals and vice versa and determine whether a decimal is terminating or repeating.
CC.7.NS.3	2-7 Comparing and Ordering Rational Numbers	rational number	I can compare and order fractions and decimals.

Chapter 3: Applying Rational Numbers

Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.

CC.7.NS.1 Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.

- Describe situations in which opposite quantities combine to make 0. For example, a hydrogen atom has 0 charge because its two constituents are oppositely charged.
- Understand $p + q$ as the number located a distance $|q|$ from p , in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.
- Understand subtraction of rational numbers as adding the additive inverse, $p - q = p + (-q)$. Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.
- Apply properties of operations as strategies to add and subtract rational numbers.

CC.7.NS.2 Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.

- Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as $(-1)(-1) = 1$ and the rules for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts.
- Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If p and q are integers then $-(p/q) = (-p)/q = p/(-q)$. Interpret quotients of rational numbers by describing real-world contexts.
- Apply properties of operations as strategies to multiply and divide rational numbers.
- Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually repeats.

Use properties of operations to generate equivalent expressions.

CC.7.EE.4 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.

- 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. For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?
- 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. 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.

Common Core	Lesson Number & Name	Vocabulary	Learning Targets
CC.7.NS.1	3-1 Adding and Subtracting Decimals		I can add and subtract decimals.
CC.7.NS.2	3-2 Multiplying Decimals		I can multiply decimals.
CC.7.NS.2	3-3 Dividing Decimals		I can divide decimals and integers by decimals.
CC.7.EE.4	3-4 Solving Equations Containing Decimals		I can solve one-step equations that contain decimals.

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CC.7.NS.1	3-5 Adding and Subtracting Fractions		I can add and subtract fractions.
CC.7.NS.2	3-6 Multiplying Fractions and Mixed Numbers		I can multiply fractions and mixed numbers.
CC.7.NS.2	3-7 Dividing Fractions and Mixed Numbers		I can divide fractions and mixed numbers.
CC.7.EE.4	3-8 Solving Equations Containing Fractions		I can one-step equations that contain fractions.

Chapter 4: Proportional Relationships

Analyze proportional relationships and use them to solve real-world and mathematical problems.

CC.7.RP.2 Recognize and represent proportional relationships between quantities.

- Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin.
- Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.
- Represent proportional relationships by equations. For example, if total cost t is proportional to the number n of items purchased at a constant price p , the relationship between the total cost and the number of items can be expressed as $t = pn$.
- Explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points $(0, 0)$ and $(1, r)$ where r is the unit rate.

Draw, construct, and describe geometrical figures and describe the relationships between them

CC.7.G.1 Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.

Common Core	Lesson Number & Name	Vocabulary	Learning Targets
CC.7.RP.2	4-1 Rates	rate unit rate	I can find and compare unit rates such as average speed and unit price.
CC.7.RP.2	4-2 Identifying and Writing Proportions	equivalent ratio proportion	I can find equivalent ratios and identify proportions.
CC.7.RP.2	4-3 Solving Proportions	cross product	I can solve proportions by using cross products.
CC.7.RP.2	4-4 Similar Figures and Proportions	similar corresponding sides corresponding angles	I can use ratios to determine if two figures are similar.
CC.7.G.1	4-5 Using Similar Figures	indirect measurement	I can use similar figures to find unknown measures.
CC.7.G.1	4-6 Scale Drawings and Scale Models	scale drawing scale factor scale model	I can understand ratios and proportions in scale drawings and use ratios and proportions with scale.

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		scale	
CC.7.G.1	4-6 LAB Make Scale Drawings and Models		I can use graph paper to make scale drawings and scale models.
CC.7.G.1	LAB Use Scale Drawings		I can use scale drawings to find actual measures of objects and to create a new drawing of the object in a different scale.

Chapter 5: Graphs

Analyze proportional relationships and use them to solve real-world and mathematical problems.

CC.7. RP.1 Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units. For example, if a person walks $\frac{1}{2}$ mile in each $\frac{1}{4}$ hour, compute the unit rate as the complex fraction $(\frac{1}{2})/(\frac{1}{4})$ miles per hour, equivalently 2 miles per hour.

CC.7. RP.2 Recognize and represent proportional relationships between quantities.

- a. Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin.
- b. Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.
- c. Represent proportional relationships by equations. For example, if total cost t is proportional to the number n of items purchased at a constant price p , the relationship between the total cost and the number of items can be expressed as $t = pn$.
- d. Explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points $(0, 0)$ and $(1, r)$ where r is the unit rate.

Common Core	Lesson Number & Name	Vocabulary	Learning Targets
	5-1 The Coordinate Plane	coordinate plane x-axis y-axis origin quadrant ordered pair	I can plot and identify ordered pairs on a coordinate plane.
	5-2 Interpreting Graphs		I can relate graphs to situations.
CC.7.RP.2	5-3 LAB Graph Proportional Relationships		I can graph proportional relationships on a coordinate plane and use the graph to determine equivalent ratios and rates.
CC.7.RP.1	5-3 Slope and Rates of Change	slope rate of change	I can determine the slope of a line and recognize constant and variable rates of change.
CC.7.RP.2	5-4 Direct Variation	direct variation constant of variation	I can identify, write, and graph an equation of direct variation.

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Chapter 6: Percents

Use properties of operations to generate equivalent expressions.

CC.7.EE.2 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. For example, $a + 0.05a = 1.05a$ means that “increase by 5%” is the same as “multiply by 1.05.”

CC.7.EE.3 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 as strategies to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies. 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 $\frac{9}{4}$ 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.

Analyze proportional relationships and use them to solve real-world and mathematical problems.

CC.7.RP.3 Use proportional relationships to solve multistep ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.

Common Core	Lesson Number & Name	Vocabulary	Learning Targets
CC.7.EE.3	6-1 Fractions, Decimals, and Percents		I can write fractions and decimals as percents.
CC.7.EE.3	6-2 Estimating with Percents		I can estimate percents.
CC.7.EE.2	6-3 Using Properties with Rational Numbers		I can use properties of rational numbers to write equivalent expressions and equations.
CC.7.RP.3	6-4 Percent of Change	percent of change percent of increase percent of decrease	I can solve problems involving percent of change.
CC.RP.3	6-5 Applications of Percents	commission commission rate	I can find commission, sales tax, and percent of earnings.
CC.7.RP.3	6-6 Simple Interest	interest simple interest principal rate of interest	I can compute simple interest.
CC.7.RP.3	6-6 LAB Explore Compound Interest		I can use a calculator to compute compound interest.

Chapter 7: Collecting, Displaying, and Analyzing Data

Use random sampling to draw inferences about a population.

CC.7.SP.1 Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences.

CC.7.SP.2 Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated

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samples) of the same size to gauge the variation in estimates or predictions. For example, estimate the mean word length in a book by randomly sampling words from the book; predict the winner of a school election based on randomly sampled survey data. Gauge how far off the estimate or prediction might be. Draw informal comparative inferences about two populations.

CC.7.SP.3 Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability. For example, the mean height of players on the basketball team is 10 cm greater than the mean height of players on the soccer team, about twice the variability (mean absolute deviation) on either team; on a dot plot, the separation between the two distributions of heights is noticeable.

CC.7.SP.4 Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations. For example, decide whether the words in a chapter of a seventh-grade science book are generally longer than the words in a chapter of a fourth-grade science book. Investigate chance processes and develop, use, and evaluate probability models.

Common Core	Lesson Number & Name	Vocabulary	Learning Targets
	7-1 Mean, Median, Mode, Range	Mean median mode range outlier	I can find the mean, median, mode and range of a data set.
CC.7.SP.4	7-2 Box-and-Whisker Plots	box-and-whisker plot lower quartile upper quartile interquartile range	I can display and analyze data in a box-and-whisker plot.
CC.7.SP.4	7-2 LAB Explore Box-and-Whisker Plots		I can use a graphing calculator to analyze data in a box-and-whisker plot.
CC.7.SP.1	7-3 Populations and Samples	population sample random sample convenience sample biased sample	I can compare and analyze sampling methods.
CC.7.SP.2	7-3 LAB Explore Samples		I can use a sampling method, collect data, and summarize results.
CC.7.SP.3	7-3 LAB Use Random Samples		I can use random samplings to make predictions about populations.

Chapter 8: Geometric Figures

Draw, construct, and describe geometrical figures and describe the relationships between them.

CC.7. G.2 Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.

CC.7. G.5 Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.

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Common Core	Lesson Number & Name	Terms	Learning Targets
	8-1 Building Blocks of Geometry	point line plane ray line segment congruent	I can identify and describe geometric figures.
CC.7.G.5	8-2 LAB Explore Complementary and Supplementary Angles		I can use a protractor to explore complimentary and supplementary angles.
CC.7.G.5	8-2 Classifying Angles	angle vertex right angle acute angle obtuse angle straight angle complimentary angles supplementary angles	I can identify angles and angle pairs.
CC.7.G.5	8-3 LAB Explore Parallel Lines and Transversals		I can use a protractor and straight edge to find relationships between the angles formed by parallel lines and transversals.
CC.7.G.5	8-3 Lines and Angle Relationships	perpendicular lines parallel lines skew lines adjacent angles vertical angles transversal	I can identify parallel, perpendicular, and skew lines and angles formed by a transversal.
CC.7.G.5	8-3 LAB Construct Bisector and Congruent Angles		I can use a compass and straight edge to construct a perpendicular bisector of a line segment, bisecting angle, and construct congruent angles.
CC.7.G.5	8-4 Angles in Polygons	Diagonal	I can find the measures of angles in polygons.
CC.7.G.2	8-5 LAB Construct Triangles with Given Side Lengths		I can geometry software to determine if three given lengths of a triangle determine a unique triangle, several different triangles, or no triangle.
CC.7.G.2	8-5 Congruent Figures	Side-Side-Side Rule	I can identify congruent figures and use congruence to solve problems.

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CC.7.G.2	8-5 LAB Explore Transformations		I can use geometry software to translate and rotate polygons.
CC.7.G.2	8-5 LAB Construct Triangles with Given Angle Measures		I can use geometry software to determine if three given angles of a triangle determine a unique triangle, several different triangles, or no triangle.

Chapter 9: Measurement and Geometry

Draw, construct, and describe geometrical figures and describe the relationships between them.

CC.7. G.3 Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.

CC.7. G.4 Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.

CC.7. G.6 Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.

Common Core	Lesson Number & Name	Vocabulary	Learning Targets
CC.7.G.4	9-1 LAB Explore Perimeter & Circumference		I can use loops of string to explore perimeter and circumference.
CC.7.G.4	9-1 Perimeter and Circumference	perimeter circumference pi	I can find the perimeter of a polygon and the circumference of a circle.
CC.7.G.4	9-2 Area of Circles		I can find the area of circles.
CC.7.G.6	9-3 Area of Irregular Figures	composite figure	I can find the area of irregular figures.
	9-4 Introduction to Three-Dimensional Figures	face edge polyhedron vertex base prism pyramid cylinder cone sphere	I can identify various three dimensional figures.
CC.7.G.3	9-4 EXT Cross Sections		I can sketch and describe cross-sections of three dimensional figures.
CC.7.G.6	9-5 LAB Explore the Volume of Prisms and Cylinders		I can use centimeter cubes to model and find the volume of prisms and cylinders.
CC.7.G.6	9-5 Volume of Prisms and Cylinders	volume	I can find volume of prisms and cylinders.

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CC.7.G.6	9-6 LAB Use Nets to Build Prisms and Cylinders		I can use graph paper to create two dimensional nets of three dimensional figures.
CC.7.G.6	9-6 Surface Area of Prisms and Cylinders	net surface area lateral face lateral area	I can find a surface are of prisms and cylinders.

Chapter 10: Probability

Use random sampling to draw inferences about a population.

CC.7.SP.5 Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.

CC.7.SP.6 Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability. For example, when rolling a number cube 600 times, predict that a 3 or 6 would be rolled roughly 200 times, but probably not exactly 200 times.

CC.7.SP.7 Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy.

a. Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events. For example, if a student is selected at random from a class, find the probability that Jane will be selected and the probability that a girl will be selected.

b. Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process. For example, find the approximate probability that a spinning penny will land heads up or that a tossed paper cup will land open-end down. Do the outcomes for the spinning penny appear to be equally likely based on the observed frequencies?

CC.7.SP.8 Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.

a. Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs.

b. Represent sample spaces for compound events using methods such as organized lists, tables and tree diagrams. For an event described in everyday language (e.g., “rolling double sixes”), identify the outcomes in the sample space which compose the event.

c. Design and use a simulation to generate frequencies for compound events. For example, use random digits as a simulation tool to approximate the answer to the question: If 40% of donors have type A blood, what is the probability that it will take at least 4 donors to find one with type A blood?

Common Core	Lesson Number & Name	Vocabulary	Learning Targets
CC.7.SP.5	10-1 Probability	experiment trial outcome event probability simple event compound event complement	I can use informal measures of probability.

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CC.7.SP.6	10-2 Experimental Probability	experimental probability	I can find experimental probability.
CC.7.SP.7	10-3 Sample Spaces	sample space Fundamental Counting Principle	I can use counting methods to determine possible outcomes.
CC.7.SP.8	10-4 Theoretical Probability	theoretical probability equally likely fair	I can find the theoretical probability of an event.
CC.7.SP.6	10-4 LAB Develop a Probability Model		I can develop a probability model for an event with equally likely outcomes OR not equally likely outcomes.
CC.7.SP.7	10-5 LAB Simulations		I can use spread sheets and calculators to model probability experiments.
CC.7.SP.8	10-5 Making Predictions	prediction	I can use probability to predict events.
CC.7.SP.7	10-5 LAB Experimental and Theoretical Probability		I can use manipulatives to calculate experimental and theoretical probability.
CC.7.SP.8	10-6 Probability of Independent and Dependent Events	independent events dependent events	I can find the probability of independent and dependent events.
CC.7.SP.8	10-7 Combination	combination	I can find the number of possible combinations.
CC.7.SP.8	10-8 Permutations	permutation factorial	I can find the number of possible permutations.
CC.7.SP.8	10-9 Probability of Compound Events		I can find probability of compound events.

Chapter 11: Multi-Step Equations and Inequalities

Use properties of operations to generate equivalent expressions

CC.7.EE.1 Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.

CC.7.EE.4 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.

- 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. For example, The perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?
- 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. 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.

Common Core	Lesson Number & Name	Vocabulary	Learning Targets
CC.7.EE.1	11-1 LAB Model Two-Step Equations		I can use algebra tiles to model and solve two-step equations.

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CC.7.EE.1	11-1 Solving Two-Step Equations		I can solve two-step equations.
CC.7.EE.4	11-2 Solving Multi-Step Equations		I can solve multi-step equations.
CC.7.EE.4	11-3 Solving Equations with Variables on Both Sides		I can solve equations that have variables on both sides.
CC.7.EE.4	11-3 EXT Examine Solution Methods		I can compare algebraic and numeric solution methods.
CC.7.EE.4	11-4 Inequalities	inequality algebraic inequality solution set compound inequality	I can read and write inequalities and graph them on a number line.
CC.7.EE.4	11-5 Solving Inequalities by Adding or Subtracting		I can solve one-step inequalities by adding or subtracting.
CC.7.EE.4	11-6 Solving Inequalities by Multiplying or Dividing		I can solve one-step inequalities by multiplying and dividing.
CC.7.EE.4	11-7 Solving Multi-Step Inequalities		I can solve simple two-step inequalities.