7th Grade
Mathematics Alignment—Common Core State Standards and CT Frameworks

NOTE: CCSS standards shown in blue do not equivalent CT standards.

CCSS Standards	CT Framework Grade Level Expectations
Ratios and Proportional Relationships	
Analyze proportional relationships and use them to solve real-world and mathematical problems.	
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 1/2 mile in each ¼ hour, compute the unit rate as the complex fraction 1/2/1/4 miles per hour, equivalently 2 miles per hour.	CT.6.2.2.11: Solve practical problems involving rates, ratios, percentages and proportionality
	CT.7.2.2.10: Write ratios and proportions to solve problems in context involving rates, scale factors and percentages.
	CT.8.2.2.9: Use proportional reasoning to write and solve problems in context.
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 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.	--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 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.
	CT.6.1.2.3: Examine tables, graphs and equations to determine patterns of change in linear relationships.
	CT.7.1.2.4: Write expressions, formulas, equations or inequalities using variables to represent mathematical relationships and solve problems.
	CT.7.1.2.6: Examine situations with constant or varying rates of change and know that a constant rate of change describes a linear relationship.

	CT.7.2.2.10: Write ratios and proportions to solve problems in context involving rate, scale factors and percentages.
	CT.8.1.1.3: Write and solve problems involving proportional relationships (direct variation) using linear equations ($y = mx$).
	CT.8.1.2.5: Represent linear and nonlinear mathematical relationships with verbal descriptions, tables, graphs and equations (when possible).
	CT.8.1.2.6: Determine the constant rate of change in a linear relationship and recognize this as the slope of a line.
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.	CT.7.2.2.10: Write ratios and proportions to solve problems in context involving rates, scale factors, and percentages.
	CT.7.2.2.11: Find and/or estimate a percentage of a number, including percentages that are more than 100 percent and less than 1 percent using a variety of strategies, including number patterns, distributive property, proportions, multiplication of decimal equivalent, and estimation.
	CT.7.2.2.12: Solve percent problems including what percentage one number is of another, percentage increase and percentage decrease using a variety of strategies, e.g., proportions or equations.
	CT.8.2.2.9: Use proportional reasoning to write and solve problems in context.
	CT.8.2.2.10: Solve a variety of problems in context involving percents, including the following: --Percentage of a number; --The percentage one number is of another number; --The percentage of a missing amount; --Percentage increase/decrease.
The Number System	
Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	
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 and 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.	--Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal and 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.	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.
	CT.7.2.2.8: Apply the order of operations and algebraic properties (i.e., commutative, associative, distributive, inverse operations, and the additive and multiplicative identities) to write, simplify, and solve problems.
	CT.7.2.2.16: Develop and describe in writing strategies for addition, subtraction, multiplication and division and solve problems with positive and negative integers using models, number lines, coordinate grids and computational strategies.
	CT.7.2.2.17: Develop an understanding of absolute value using a number line while solving problems involving distance.
	CT.8.2.2.5: Compute (using addition, subtraction, multiplication and division) and solve problems with positive and negative rational numbers.
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) as 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	--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) as 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

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.	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.
	CT.7.2.2.8: Apply the order of operations and algebraic properties (i.e., commutative, associative, distributive, inverse operations, and the additive and multiplicative identities) to write, simplify, and solve problems, including those with parentheses and exponents.
	CT.7.2.2.16: Develop and describe in writing strategies for addition, subtraction, multiplication and division and solve problems with positive and negative integers using models, number lines, coordinate grids and computational strategies.
	CT.8.2.2.5: Compute (using addition, subtraction, multiplication and division) and solve problems with positive and negative rational numbers.
	CT.7.2.1.2: Represent rational numbers in equivalent fraction, decimal and percentage forms.
	CT.7.2.1.3: Represent fractions as terminating or repeating decimals and determine when it is appropriate to round the decimal form in context.
	CT.8.2.1.4: Represent fractions, mixed numbers, decimals and percentages in equivalent forms.
7.NS.3: Solve real-world and mathematical problems involving the four operations with rational numbers. (Computations with rational numbers extend the rules for manipulating fractions to complex fractions.)	CT.7.2.2.9: Apply a variety of strategies to write and solve problems involving addition, subtraction, multiplication and division of positive rational numbers (i.e., whole numbers, fractions and decimals).
	CT.8.2.2.5: Compute (using addition, subtraction, multiplication and division) and solve problems with positive and negative rational numbers.
Expressions and Equations	
Use properties of operations to generate equivalent expressions.	
7.EE.1: Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.	CT.7.1.3.7: Evaluate and simplify algebraic expressions, equations and formulas using algebraic properties (i.e., commutative, associative, distributive, inverse operations, and the additive and multiplicative identities) and the order of operations.
	CT.8.1.3.10: Evaluate and simplify algebraic expressions, equations and formulas, including those with powers, using algebraic properties and the order of operations.

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."	--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."
	CT.7.1.2.4: Write expressions, formulas, equations or inequalities using variables to represent mathematical relationships and solve problems.
Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	
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 to calculate 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 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 ¾ inches long in the center of a door that is 27 ½ 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.	CT.7.2.2.7: Estimate solutions to problems in context or computations with rational numbers and justify the reasonableness of the estimate in writing.
	CT.7.2.2.10: Write ratios and proportions to solve problems in context involving rates, scale factors and percentages.
	CT.7.2.2.12: Solve percent problems in context including what percentage one number is of another, percentage increase and percentage decrease using a variety of strategies (e.g., proportions or equations).
	CT.7.2.2.16: Develop and describe in writing strategies for addition, subtraction, multiplication and division and solve problems with positive and negative integers using models, number lines, coordinate grids and computational strategies.
	CT.7.1.3.8: Solve real world problems using a variety of algebraic methods including tables, graphs, equations and inequalities.
	CT.7.3.3.11: Write and solve problems in context involving conversions of customary and metric units and units of time.
	CT.8.2.2.5: Compute using addition, subtraction, multiplication and division; solve problems with positive and negative rational numbers.
	CT.8.2.2.8: Estimate reasonable answers and solve problems in context involving rational and common irrational numbers, ratios and percentages, including percentage of increase and decrease, and justify solutions in writing.
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	--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 $px + q > r$ and $p(x = q) = r$, 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 play to be at least $100. Write an inequality for the number of sales you need to make, and describe the solutions.	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 $px + q > r$ and $p(x = q) = r$, 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 play to be at least $100. Write an inequality for the number of sales you need to make, and describe the solutions.
	CT.7.1.1.1: Analyze a variety of patterns (physical phenomena, numeric and geometric patterns, arithmetic sequences) and generalize with algebraic expression, formulas or equations.
	CT.7.1.2.4: Write expressions, formulas, equations or inequalities using variables to represent mathematical relationships and solve problems.
	CT.7.1.2.9: Write, model and solve one- and two-step equations such as $2x + 3 = 11$ using a variety of methods, including tables, concrete models and the Properties of Equality, and justify the solution.
	CT.8.1.3.12: Write and solve multistep equations using various algebraic methods including the distributive property, combining like terms, and properties of equality and justify the solutions.
Geometry	
Draw, construct and describe geometrical figures and describe the relationships between them.	
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.	--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.
	CT.6.3.2.7: Use measurements to examine the ratios between corresponding side lengths of scale models and similar figures.
	CT.7.2.2.10: Write ratios and proportions to solve problems in context involving rates, scale factors and percentages.
	CT.7.3.1.5: Compare and describe in writing the relationships, including congruence, equality and scale, between the angles, sides, perimeters and areas of congruent and similar geometric shapes.
	CT.8.3.1.1: Determine the effect of scale factors (resulting in similar figures) on the perimeters and areas of two-dimensional shapes and on the surface areas and volumes of three-dimensional solids.

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 not triangle.	--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 not triangle.
	CT.7.3.1.1: Classify two- and three-dimensional geometric figures based on their properties including relationships of sides and angles and symmetry (line and/or rotational) and apply this information to solve problems.
	CT.8.3.1.3: Construct and/or examine right triangles, make and test conjectures about the relationships of the angles and sides and develop the Pythagorean Theorem.
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.	--Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.
Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.	
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.	CT.6.3.1.5: Recognize the relationships among radius, diameter, circumference and area of circles and develop formulas for finding circumference and area based on these relationships.
	CT.7.3.3.8: Use formulas to solve problems involving perimeters and areas of polygons and circles.
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.	--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.
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.	CT.7.3.2.7: Use two-dimensional representations of rectangular prisms, pyramids and cylinders to determine surface area.
	CT.7.3.3.9: Develop and use formulas to determine volumes of geometric solids (rectangular prisms and cylinders).
	CT.7.3.3.10: Use estimation and measurement strategies to solve problems involving area of irregular polygons and volumes of irregular solids and justify solutions in writing.
	CT.7.3.3.8: Use formulas to solve problems involving perimeters and areas of polygons and circles.
	CT.8.3.2.6: Develop and use formulas to determine the surface areas of rectangular prisms, cylinders and pyramids.

	CT.8.3.2.7: Develop formulas using measurement strategies and concrete models, and use formulas to determine the volumes of pyramids, cones and spheres.
	CT.8.3.3.9: Use estimation and measurement strategies, including formulas, to solve surface area and volume problems in context.
Statistics and Probability	
Use random sampling to draw inferences about a population.	
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.	--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.
	CT.8.4.2.8: Explain the effects of sample size and sampling techniques (convenience sampling, voluntary response sampling, systematic sampling and random sampling) on statistical claims.
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 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.	--Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated 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.	
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.	--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.
	CT.7.4.2.5: Compare two sets of data based on their spread and measures of central tendency.
	CT.8.4.1.3: Identify where measures of central tendency and spread are found in graphical displays, including box-and-whisker plots, stem-and-leaf plots, scatter plots, and histograms.

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.	--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.
	CT.7.4.2.5: Compare two sets of data based on their spread and measures of central tendency.
Investigate chance processes and develop, use and evaluate probability models.	
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 ½ indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.	CT.2.4.3.5: Describe and explain the likelihood of the occurrence of various events. State possibilities, make predictions and text the predictions in practical situations.
	CT.3.4.3.6: Describe the probability of an outcome as ___ out of ___ such as three out of five.
	CT.4.4.3.5: Conduct probability experiments and express the probability based on possible outcomes.
	CT.5.4.3.6: Determine and describe possible outcomes, and express the likelihood of events as a fraction.
	CT.6.4.3.7: Express probabilities as fractions, ratios, decimals and percentages.
	CT.7.4.3.9: Solve probability problems in familiar contexts, including simple events such as flipping a coin and compound events such as flipping a coin and rolling a number cube.
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.	CT.5.4.3.5: Design and conduct probability experiments and simple games of chance to test predictions about outcomes and fairness.
	CT.6.4.3.5: Investigate and describe the relationship between the number of trials in an experiment and the predicted outcomes.
	CT.6.4.3.6: Design and conduct probability experiments to test predictions about outcomes and fairness.
	CT.7.4.3.7: Perform experiments to determine experimental probabilities.
	CT.7.4.3.8: Compare and contrast experimental probability results to theoretical probabilities in writing.
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.	--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

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?	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?
	CT.5.4.3.5: Design and conduct probability experiments and simple games of chance to test predictions about outcomes and fairness.
	CT.6.4.3.6: Design and conduct probability experiments to test predictions about outcomes and fairness.
	CT.7.4.3.6: Identifying all possible outcomes using models, tree diagrams, tables and/or organized lists to determine theoretical probabilities.
	CT.7.4.3.7: Perform experiments to determine experimental probabilities.
	CT.7.4.3.8: Compare and contrast experimental probability results to theoretical probabilities in writing.
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?	--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
	CT.7.4.3.6: Identifying all possible outcomes using models, tree diagrams, tables and/or organized lists to determine theoretical probabilities.
	CT.7.4.3.7: Perform experiments to determine experimental probabilities.

	CT.7.4.3.9: Solve probability problems in familiar contexts, including simple events such as flipping a coin and compound events such as flipping a coin and rolling a number cube.