GRADE 7

Ratios & Proportional Relationships

Common Core State Standard	Assessment	Resources	Vocabulary
Analyze proportional relationships and use them to solve real-world and mathematical problems. **CCSS.Math.Content.7.RP.A.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 1/4 hour, compute the unit rate as the complex fraction $^{1/2}/_{1/4}$ miles per hour, equivalently 2 miles per hour*.	**Digits Topic 1 Ratios & Rates** 1.1 Equivalent Ratios 1.2 Unit Rates 1.3 Ratios With Fractions 1.4 Unit Rates With Fractions 1.5 Problem Solving Topic 1 Review Topic 1 Assessment	Digits Online Digits Textbook Kuta Website Engage NY Files	**r**atio, terms of a ratio, equivalent ratios, unit rate, unit price, least common multiple
CCSS.Math.Content.7.RP.A.2 Recognize and represent proportional relationships between quantities.	**Digits Topic 2 Proportional Relationships** 2.1 Proportional Relationships and Tables 2.2 Proportional	Digits Online Digits Textbook Kuta Website Engage NY Files	proportional relationship, equivalent ratios, constant of proportionality, proportion, dependent

	Relationships and Graphs 2.3 Constant of Proportionality 2.4 Proportional Relationships and Equations 2.5 Maps and Scale Drawings 2.6 Problem Solving Topic 2 Review Topic 2 Assessment **Digits Topic 3 Percents (select sections)** 3.1 The percent Equation 3.2 Using the Percent Equation 3.3 SImple Interest 3.5 Percent Increase & Decrease Topic 3 Review Topic 3 Assessment		variable, independent variable, scale drawing, scale percent equation, commission, interest, simple interest, principal, interest rate, balance, interest period, markup, markdown, percent of increase, percent of decrease
CCSS.Math.Content.7.RP.A.2.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.	**Digits Topics** 2.1 Proportional Relationships and Tables 2.2 Proportional Relationships and Graphs 2.6 Problem Solving	Digits Online Digits Textbook Kuta Website Engage NY Files	ratios, constant of proportionality, proportion, dependent variable, independent variable, scale drawing, scale

CCSS.Math.Content.7.RP.A.2.b Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.	**Digits Topics** 2.3 Constant of Proportionality 2.4 Proportional Relationships and Equations 2.6 Problem Solving 3.1 The percent Equation	Digits Online Digits Textbook Kuta Website Engage NY Files	ratios, constant of proportionality, proportion, dependent variable, independent variable, scale drawing, scale, percent equation
CCSS.Math.Content.7.RP.A.2.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*.	**Digits Topics** 2.4 Proportional Relationships and Equations Problem Solving 3.1 The percent Equation	Digits Online Digits Textbook Kuta Website Engage NY Files	ratios, constant of proportionality, proportion, dependent variable, independent variable, scale drawing, scale, percent equation
CCSS.Math.Content.7.RP.A.2.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.	**Digits Topics** 2-2 Proportional Relationships and Graphs 2-3 Constant of Proportionality 14-2 Estimating a Population 14-3 Convenience Sampling 14-4 Systematic Sampling 14-5 Simple Random Sampling	Digits Online Digits Textbook Kuta Website Engage NY Files	ratios, constant of proportionality, population, sample of a population, representative sample, bias, biased sample, inference, valid inference, estimating a population, constant of proportionality, sampling method, convenience sampling, systematic sampling, simple random

	14-7 Problem Solving		sampling
CCSS.Math.Content.7.RP.A.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.	**Digits Topics** 3-2 Using the Percent Equation 3-3 Simple Interest 3-5 Percent Increase and Decrease 3-6 Markups and Markdowns 3-7 Problem Solving 6-6 Percent Error 14-2 Estimating a Population 14-3 Convenience Sampling 14-4 Systematic Sampling 14-5 Simple Random Sampling 14-7 Problem Solving 17-7 Problem Solving	Digits Online Digits Textbook Kuta Website Engage NY Files	percent equations, simple interest, percent, increase, decrease, markup, mark down, percent error, population, sample of a population, representative sample, bias, biased sample, inference, valid inference, estimating a population, constant of proportionality, sampling method, convenience sampling, systematic sampling, simple random sampling

The Number System			
Common Core State Standard	**Assessment**	**Resources**	**Vocabulary**
Apply and extend previous understandings of operations with fractions. **CCSS.Math.Content.7.NS.A.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.	**Digits Topics** 4-1 Rational Numbers, Opposites, and Absolute Value 4-2 Adding Integers 4-4 Subtracting Integers 4-5 Subtracting Rational Numbers Topic 4 Review Topic 4 Assessment	Digits Online Digits Textbook Kuta Website Engage NY Files	absolute value, integers, rational numbers, whole numbers, additive inverses
CCSS.Math.Content.7.NS.A.1.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*	**Digits Topics** 4-1 Rational Numbers, Opposites, and Absolute Value Topic 4 Review Topic 4 Assessment	Digits Online Digits Textbook Kuta Website Engage NY Files	absolute value, integers, rational numbers, whole numbers, additive inverses
CCSS.Math.Content.7.NS.A.1.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	**Digits Topics** 4-2 Adding Integers 4-3 Adding Rational Numbers 4-5 Subtracting Rational Numbers	Digits Online Digits Textbook Kuta Website Engage NY Files	absolute value, integers, rational numbers, whole numbers, additive inverses

additive inverses). Interpret sums of rational numbers by describing real-world contexts.	4-7 Problem Solving Topic 4 Review Topic 4 Assessment		
CCSS.Math.Content.7.NS.A.1.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.	**Digits Topics** 4-4 Subtracting Integers 4-6 Distance on a Number Line 4-7 Problem Solving Topic 4 Review Topic 4 Assessment	Digits Online Digits Textbook Kuta Website Engage NY Files	absolute value, integers, rational numbers, whole numbers, additive inverses
CCSS.Math.Content.7.NS.A.1.d Apply properties of operations as strategies to add and subtract rational numbers.	**Digits Topics** 4-3 Adding Rational Numbers	Digits Online Digits Textbook Kuta Website Engage NY Files	absolute value, integers, rational numbers, whole numbers, additive inverses
CCSS.Math.Content.7.NS.A.2 Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.	**Digits Topics** 5-1 Multiplying Integers 5-2 Multiplying Rational Numbers 5-3 Dividing Integers 5-4 Dividing Rational Numbers 5-5 Operations With Rational Numbers 5-6 Problem Solving Topic 5 Review Topic 5 Assessment	Digits Online Digits Textbook Kuta Website Engage NY Files	reciprocals, complex fraction
CCSS.Math.Content.7.NS.A.2.a	**Digits Topics**	Digits Online	reciprocals, complex

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.	5-1 Multiplying Integers 5-2 Multiplying Rational Numbers	Digits Textbook Kuta Website Engage NY Files	fraction
CCSS.Math.Content.7.NS.A.2.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	**Digits Topics** 5-3 Dividing Integers 5-4 Dividing Rational Numbers 6-1 Repeating Decimals 6-2 Terminating Decimals 6-5 Fractions, Decimals, and Percents	Digits Online Digits Textbook Kuta Website Engage NY Files	reciprocals, complex fraction repeating decimals, terminating decimals, accuracy, percent error
. **CCSS.Math.Content.7.NS.A.2.c** Apply properties of operations as strategies to multiply and divide rational numbers**.**	**Digits Topics** 5-1 Multiplying Integers 5-5 Operations With Rational Numbers	Digits Online Digits Textbook Kuta Website Engage NY Files	reciprocals, complex fraction
CCSS.Math.Content.7.NS.A.2.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.	**Digits Topics** 6-1 Repeating Decimals 6-2 Terminating Decimals 6-5 Fractions, Decimals, and Percents	Digits Online Digits Textbook Kuta Website Engage NY Files	repeating decimals, terminating decimals, accuracy, percent error

CCSS.MATH.CONTENT.7.NS.A.3 Solve real-world and mathematical problems involving the four operations with rational numbers.	**Digits Topics** 5-5 Operations With Rational Numbers 6-3 Percents Greater Than 100 6-4 Percents Less Than 1 6-5 Fractions, Decimals, and Percents	Digits Online Digits Textbook Kuta Website Engage NY Files	reciprocals, complex fraction, repeating decimals, terminating decimals, accuracy, percent error

Expressions & Equations

Common Core State Standard	Assessment	Resources	Vocabulary
CCSS.Math.Content.7.EE.A.1 Use properties of operations to generate equivalent expressions. Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.	**Digits Topics** Topic 7: Equivalent Expressions 7-1 Expanding Algebraic Expressions 7-2 Factoring Algebraic Expressions 7-3 Adding Algebraic Expressions 7-4 Subtracting Algebraic Expressions 7-5 Problem Solving Topic 7 Review Topic 7 Assessment	Digits Online Digits Textbook Kuta Website Engage NY Files	expand an algebraic expression, like terms, factor an algebraic expression, coefficients, constants, simplify an algebraic expression

CCSS.Math.Content.7.EE.A.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."* Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	**Digits Topics** Topic 7: Equivalent Expressions 7-1 Expanding Algebraic Expressions 7-2 Factoring Algebraic Expressions 7-3 Adding Algebraic Expressions 7-4 Subtracting Algebraic Expressions 7-5 Problem Solving Topic 7 Review Topic 7 Assessment	Digits Online Digits Textbook Kuta Website Engage NY Files	expand an algebraic expression, like terms, factor an algebraic expression, coefficients, constants, simplify an algebraic expression
CCSS.Math.Content.7.EE.B.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 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*	**Digits Topics** 4-7 Problem Solving 5-6 Problem Solving 8-3 Solving Two-Step Equations 8-4 Solving Equations Using the Distributive Property 8-5 Problem Solving 11-2 Circumference of a Circle 11-3 Area of a Circle 11-4 Relating Circumference and Area	Digits Online Digits Textbook Kuta Website Engage NY Files	**See "Review" in Digits for specific section for vocabulary references.**

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 3/4 inches long in the center of a door that is 27 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.	of a Circle 11-5 Problem Solving Topic 13: Surface Area and Volume 14-2 Estimating a Population 14-3 Convenience Sampling 14-4 Systematic Sampling 14-5 Simple Random Sampling 14-7 Problem Solving 16-1 Likelihood and Probability 16-3 Relative Frequency and Experimental Probability 16-4 Theoretical Probability 16-5 Probability Models 16-6 Problem Solving 17-4 Finding Theoretical Probabilities 17-6 Finding Probabilities by Simulation 17-7 Problem Solving		
CCSS.Math.Content.7.EE.B.4 Use variables to represent quantities in a real-world or mathematical problem, and	**Digits Topics** Topic 8: Equations Topic 9: Inequalities 10-1 Measuring Angles	Digits Online Digits Textbook Kuta Website Engage NY Files	**See "Review" in Digits for specific section for vocabulary references.**

construct simple equations and inequalities to solve problems by reasoning about the quantities.	Topic 11 Circles 12-6 Problem Solving Topic 13 Surface Area and Volume		
CCSS.Math.Content.7.EE.B.4.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?*	**Digits Topics** 8-1 Solving Simple Equations 8-2 Writing Two-Step Equations 8-3 Solving Two-Step Equations 8-4 Solving Equations Using the Distributive Property 8-5 Problem Solving Topic 8 Review Topic 8 Assessment 10-1 Measuring Angles 10-2 Adjacent Angles 10-3 Complementary Angles 10-6 Problem Solving 11-1 Center, Radius, and Diameter	Digits Online Digits Textbook Kuta Website Engage NY Files	isolate, two-step equation angle, vertex of an angle, straight angle, obtuse angle, right angle, acute angle, adjacent angles, complementary angles, supplementary angles, vertical angles center, radius, diameter
CCSS.Math.Content.7.EE.B.4.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	**Digits Topics** 9-1 Solving Inequalities Using Addition or Subtraction 9-2 Solving Inequalities Using Multiplication or Division 9-3 Solving Two-Step	Digits Online Digits Textbook Kuta Website Engage NY Files	inequality, solution of an inequality, solution set, conjecture, equivalent inequalities

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*.	Inequalities 9-4 Solving Multi-Step Inequalities 9-5 Problem Solving Topic 9 Review Topic 9 Assessment		

Geometry			
Common Core State Standard	**Assessment**	**Resources**	**Vocabulary**
Draw construct, and describe geometrical figures and describe the relationships between them. CCSS.Math.Content.7.G.A.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.	**Digits Topics** 2-5 Maps and Scale Drawings 2-6 Problem Solving	Digits Online Digits Textbook Kuta Website Engage NY Files	scale, scale figure
CCSS.Math.Content.7.G.A.2	**Digits Topics**	Digits Online	angle, vertex of an

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.	Topic 10 Angles 11-1 Center, Radius, and Diameter 11-2 Circumference of a Circle 11-3 Area of a Circle 12-1 Geometry Drawing Tools 12-2 Drawing 2-D Figures with Given Conditions 1 12-3 Drawing 2-D Figures with Given Conditions 2 12-6 Problem Solving	Digits Textbook Kuta Website Engage NY Files	angle, straight angle, obtuse angle, right angle, acute angle, adjacent angles, complementary angles, supplementary angles, vertical angles, circle, center of a circle, radius, diameter, circumference of a circle, area of a circle quadrilateral, parallel, perpendicular, included side, included angle, net, pyramid, cross section.
CCSS.Math.Content.7.G.A.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.	**Digits Topics** 12-4 2-D Slices of Right Rectangular Prisms 12-5 2-D Slices of Right Rectangular Pyramids 12-6 Problem Solving	Digits Online Digits Textbook Kuta Website Engage NY Files	quadrilateral, parallel, perpendicular, included side, included angle, net, pyramid, cross section.
Solve real-life and mathematical problems involving angle measure, area, surface area, and volume. CCSS.Math.Content.7.G.B.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	**Digits Topics** 11-1 Center, Radius, and Diameter 11-2 Circumference of a Circle 11-3 Area of a Circle 11-4 Relating Circumference and Area of a Circle 11-5 Problem Solving	Digits Online Digits Textbook Kuta Website Engage NY Files	circle, center of a circle, radius, diameter, circumference of a circle, area of a circle

circumference and area of a circle.	Topic 11 Review Topic 11 Assessment		
CCSS.Math.Content.7.G.B.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.	**Digits Topics** 10-2 Adjacent Angles 10-3 Complementary Angles 10-4 Supplementary Angles 10-5 Vertical Angles 10-6 Problem Solving Topic 10 Review Topic 10 Assessment	Digits Online Digits Textbook Kuta Website Engage NY Files	angle, vertex of an angle, straight angle, obtuse angle, right angle, acute angle, adjacent angles, complementary angles, supplementary angles, vertical angles
CCSS.Math.Content.7.G.B.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.	**Digits Topics** 12-6 Problem Solving 13-1 Surface Areas of Right Prisms 13-2 Volumes of Right Prisms 13-3 Surface Areas of Right Pyramids 13-4 Volumes of Right Pyramids 13-5 Problem Solving Topic 13 Review Topic 13 Assessment	Digits Online Digits Textbook Kuta Website Engage NY Files Boxes and groceries	quadrilateral, parallel, perpendicular, included side, included angle, net, pyramid, cross section.

Statistics & Probability

Common Core State Standard	Assessment	Resources	Vocabulary
Use random sampling to draw inferences about a population. CCSS.Math.Content.7.SP.A.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.	**Digits Topics** 14-1 Populations and Samples 14-2 Estimating a Population 14-3 Convenience Sampling 14-4 Systematic Sampling 14-5 Simple Random Sampling 14-6 Comparing Sampling Methods 14-7 Problem Solving Topic 14 Review Topic 14 Assessment	Digits Online Digits Textbook Kuta Website Engage NY Files	population, sample of a population, representative sample, bias, biased sample, inference, valid inference, estimating a population, constant of proportionality, sampling method, convenience sampling, systematic sampling, simple random sampling
CCSS.Math.Content.7.SP.A.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*.	**Digits Topics** 14-2 Estimating a Population 4-5 Simple Random Sampling 14-7 Problem Solving	Digits Online Digits Textbook Kuta Website Engage NY Files	population, sample of a population, representative sample, bias, biased sample, inference, valid inference, estimating a population, constant of proportionality, sampling method, convenience sampling, systematic sampling, simple random sampling

Draw informal comparative inferences about two populations. CCSS.Math.Content.7.SP.B.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*.	**Digits Topics** 15-2 Multiple Populations and Inferences 15-5 Exploring Overlap in Data Sets	Digits Online Digits Textbook Kuta Website Engage NY Files	median, mean, range, interquartile range, comparative inference, mean absolute deviation
CCSS.Math.Content.7.SP.B.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*.	**Digits Topics** 15-1 Statistical Measures 15-2 Multiple Populations and Inferences 15-3 Using Measures of Center 15-4 Using Measures of Variability 15-5 Exploring Overlap in Data Sets Lesson 15-6 Problem Solving Topic 15 Review Topic 15 Assessment	Digits Online Digits Textbook Kuta Website Engage NY Files	median, mean, range, interquartile range, comparative inference, mean absolute deviation

Investigate chance processes and develop, use, and evaluate probability models. CCSS.Math.Content.7.SP.C.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.	**Digits Topics** 16-1 Likelihood and Probability	Digits Online Digits Textbook Kuta Website Engage NY Files	probability of an event, outcome, sample space, event, action, trial, relative frequency, experimental probability, theoretical probability, simulation, probability model, uniform probability model
CCSS.Math.Content.7.SP.C.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*.	**Digits Topics** 16-1 Likelihood and Probability 16-3 Relative Frequency and Experimental Probability 17-4 Finding Theoretical Probabilities	Digits Online Digits Textbook Kuta Website Engage NY Files	probability of an event, outcome, sample space, event, action, trial, relative frequency, experimental probability, theoretical probability, simulation, probability model, uniform probability model action, compound event, independent events, dependent

			events, sample space, The Counting Principle
CCSS.Math.Content.7.SP.C.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.	**Digits Topics** 16-2 Sample Space 16-4 Theoretical Probability 16-5 Probability Models 16-6 Problem Solving 17-7 Problem Solving	Digits Online Digits Textbook Kuta Website Engage NY Files	probability of an event, outcome, sample space, event, action, trial, relative frequency, experimental probability, theoretical probability, simulation, probability model, uniform probability mode action, compound event, independent events, dependent events, sample space, The Counting Principle
CCSS.Math.Content.7.SP.C.7.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*.	**Digits Topics** 16-4 Theoretical Probability 16-5 Probability Models 16-6 Problem Solving	Digits Online Digits Textbook Kuta Website Engage NY Files	probability of an event, outcome, sample space, event, action, trial, relative frequency, experimental probability, theoretical probability, simulation, probability model, uniform probability model

CCSS.Math.Content.7.SP.C.7.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?*	**Digits Topics** 16-5 Probability Models 16-6 Problem Solving	Digits Online Digits Textbook Kuta Website Engage NY Files	probability of an event, outcome, sample space, event, action, trial, relative frequency, experimental probability, theoretical probability, simulation, probability model, uniform probability model
CCSS.Math.Content.7.SP.C.8 Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.	**Digits Topics** 17-1 Compound Events 17-2 Sample Spaces 17-3 Counting Outcomes 17-4 Finding Theoretical Probabilities 17-5 Simulation With Random Numbers 17-6 Finding Probabilities by Simulation 17-7 Problem Solving Topic 17 Review Topic 17 Assessment	Digits Online Digits Textbook Kuta Website Engage NY Files	action, compound event, independent events, dependent events, sample space, The Counting Principle
CCSS.Math.Content.7.SP.C.8.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	**Digits Topics** 17-3 Counting Outcomes 17-4 Finding Theoretical Probabilities	Digits Online Digits Textbook Kuta Website Engage NY Files	action, compound event, independent events, dependent events, sample space, The Counting Principle
CCSS.Math.Content.7.SP.C.8.b Represent sample spaces for compound	**Digits Topics** 17-1 Compound Events	Digits Online Digits Textbook	action, compound event, independent events,

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.	17-2 Sample Spaces 17-3 Counting Outcomes	Kuta Website Engage NY Files	dependent events, sample space, The Counting Principle
CCSS.Math.Content.7.SP.C.8.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?*	**Digits Topics** 17-5 Simulation With Random Numbers	Digits Online Digits Textbook Kuta Website Engage NY Files	action, compound event, independent events, dependent events, sample space, The Counting Principle

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