

3rd Grade Mathematics Curriculum Map For Common Core State Standards (CCK12)

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§	Content	Standards
1	 Place Value Ones, Tens, Hundreds Thousands Ten Thousands, Hundred Thousands Comparing Numbers Using Place Value 	
2	Comparing and Rounding Numbers Comparing Numbers Ordering Numbers Introduction to Rounding Concepts of Rounding 	3.NBT.1.: Use place value understanding to round whole numbers to the nearest 10 or 100.
3	Number Patterns • Even and Odd Numbers • Skip-Counting • Introduction to Number Patterns • Number Patterns	 3.OA.9.: Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends. 3.NBT.2.: Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.
4	Money and Decimals • Bills and Coins • Combining Bills and Coins • Making Change • Money and Decimals	3.NBT.2.: Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.
5	Addition • Adding Coins • Adding Bills • Adding Money • Adding and Subtracting Money Using Column Addition	3.NBT.2.: Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.
6	Relationship between Addition and Subtraction • Inverse Operations • 3-Digit Addition and Subtraction • Addition with Regrouping • Subtraction with Regrouping	 3.OA.8.: Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. 3.NBT.2.: Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

§	Content	Standards
7	Equations • Writing Equations from Story Problems • Understanding Equations • Understanding Story Problems • Writing Expressions from Words	3.OA.3.: Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
		3.OA.8.: Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.
		3.NBT.2.: Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.
8	Time Reading a Clock To The Minute Adding Time Adding, Subtracting, and Elapsed Time 	3.MD.1.: Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.
9	Multiplication Factors Multiplication using Skip-Counting Multiplication using Area More Multiplication 	3.OA.1.: Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as 5×7 .
		3.OA.3.: Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
		3.OA.7.: Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 / 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.
		3.OA.8.: Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.
		3.MD.7(b): Multiply side lengths to find areas of rectangles with whole- number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.

§	Content	Standards
10	Multiplication Patterns and Properties Associative Property of Multiplication Patterns Commutative Property of Multiplication Story Problems 	3.OA.1.: Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as 5×7 .
		3.OA.3.: Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
		3.OA.5.: Apply properties of operations as strategies to multiply and divide. Examples: If $6 \times 4 = 24$ is known, then $4 \times 6 = 24$ is also known. (Commutative property of multiplication.) $3 \times 5 \times 2$ can be found by $3 \times 5 = 15$, then $15 \times 2 = 30$, or by $5 \times 2 = 10$, then $3 \times 10 = 30$. (Associative property of multiplication.) Knowing that $8 \times 5 = 40$ and $8 \times 2 = 16$, one can find 8×7 as $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$. (Distributive property.)
		3.OA.7.: Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 / 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.
		3.OA.8.: Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.
		3.OA.9.: Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.
		3.MD.7(b): Multiply side lengths to find areas of rectangles with whole- number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.

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11	Multiplication with 10s and 100s • Multiplying by 10 and 100 • Multiplying Multiples of 10 • Multiplying Multiples of 100 • Multiplying Money	 3.OA.3.: Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. 3.OA.7.: Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 x 5 = 40, one knows 40 / 5 = 8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers. 3.OA.8.: Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. 3.NBT.3.: Multiply one-digit whole numbers by multiples of 10 in the
		range 10-90 (e.g., 9×80 , 5×60) using strategies based on place value and properties of operations.
12	Multiplication and Division • Introduction to Division • Inverse Operations and Fact Families • Fact Families • Using Inverse Operations	3.OA.2.: Interpret whole-number quotients of whole numbers, e.g., interpret 56 / 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. For example, describe a context in which a number of shares or a number of groups can be expressed as 56 / 8.
		3.OA.3.: Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
		3.OA.6.: Understand division as an unknown-factor problem. For example, find 32 / 8 by finding the number that makes 32 when multiplied by 8.
		3.OA.7.: Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 / 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.
		3.OA.8.: Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

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13	Story Problems • Solving for n • Using Division to Solve Multiplication Number Sentences • One- and Two-Step Story Problems • Problem Solving	3.OA.3.: Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
		3.OA.6.: Understand division as an unknown-factor problem. For example, find 32 / 8 by finding the number that makes 32 when multiplied by 8.
		3.OA.7.: Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 / 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.
		3.OA.8.: Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.
		3.NBT.2.: Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.
14	Division • Relating Division and Subtraction • Division Facts • Division with 1 • Division with 0	3.OA.2.: Interpret whole-number quotients of whole numbers, e.g., interpret 56 / 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. For example, describe a context in which a number of shares or a number of groups can be expressed as 56 / 8.
		3.OA.3.: Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
		3.OA.6.: Understand division as an unknown-factor problem. For example, find 32 / 8 by finding the number that makes 32 when multiplied by 8.
		3.OA.7.: Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 / 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.
		3.OA.8.: Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

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15	Division in Story Problems • Division Stories • Division Stories • Choosing Operations for Story Problems • Story Problems	3.OA.3.: Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
		3.OA.7.: Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 / 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.
		3.OA.8.: Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.
		3.NBT.2.: Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.
16	Division & Remainders • Division with Multiples of 10 & 100 • Remainders • Problem Solving with Remainders	3.OA.2.: Interpret whole-number quotients of whole numbers, e.g., interpret 56 / 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. For example, describe a context in which a number of shares or a number of groups can be expressed as 56 / 8.
		3.OA.3.: Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
		3.OA.6.: Understand division as an unknown-factor problem. For example, find 32 / 8 by finding the number that makes 32 when multiplied by 8.
		3.OA.7.: Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 / 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.
		3.OA.8.: Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.
		3.NBT.3.: Multiply one-digit whole numbers by multiples of 10 in the range 10-90 (e.g., 9 x 80, 5 x 60) using strategies based on place value and properties of operations.

§	Content	Standards
17	 1-Dimensional Data Graphs Interpreting Pictographs Making and Reading Bar Graphs Interpreting Bar Graphs Making and Reading Pictographs 	 MP.4.: Model with mathematics. 3.MD.3.: Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets.
18	 1-Dimensional Data Collecting Data Median Mode Mean 	MP.4.: Model with mathematics. 3.OA.2.: Interpret whole-number quotients of whole numbers, e.g., interpret 56 / 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. For example, describe a context in which a number of shares or a number of groups can be expressed as 56 / 8.
19	Collecting and Organizing Data Surveys Data from Surveys Data from Measurements Measuring in Two Dimensions 	 MP.4.: Model with mathematics. 3.MD.3.: Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets. 3.MD.4.: Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units whole numbers, halves, or quarters.
20	 2-Dimensional Data and Graphs Making Predictions from Graphs 2-Variable Data and Ordered Pairs Naming Points with Ordered Pairs Line Graphs and Graphing Data 	MP.4.: Model with mathematics. 3.MD.4.: Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units whole numbers, halves, or quarters.
21	Introduction to Geometry Points, Lines, Line Segments, and Rays Angles Polygons Triangles 	3.G.1.: Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.
22	 Polygons and Perimeter Attributes of Polygons Shared Attributes of Quadrilaterals Perimeter Number Sentences with Perimeter 	 3.MD.8.: Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters. 3.G.1.: Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.

§	Content	Standards
23	Circles, Symmetry, and Area • Area • Subdividing Shapes with Fractions • Circles • Symmetry	3.NF.1.: Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size 1/b.
		3.NF.3(c): Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. Examples: Express 3 in the form $3 = 3/1$; recognize that $6/1 = 6$; locate $4/4$ and 1 at the same point of a number line diagram.
		3.MD.5(a): A square with side length 1 unit, called "a unit square," is said to have "one square unit" of area, and can be used to measure area.
		3.MD.5(b): A plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units.
		3.MD.6.: Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).
		3.MD.7(a): Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.
		3.MD.7(b): Multiply side lengths to find areas of rectangles with whole- number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.
		3.MD.7(d): Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.
		3.G.1.: Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.
		3.G.2.: Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into 4 parts with equal area, and describe the area of each part as 1/4 of the area of the shape.

§	Content	Standards
Multiplying Side	Area Unit Squares and Area Multiplying Side Lengths to Find Area Distributive Property of Multiplication over 	3.MD.5(a): A square with side length 1 unit, called "a unit square," is said to have "one square unit" of area, and can be used to measure area.
	Addition • Splitting Other Shapes into Rectangles	3.MD.5(b): A plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units.
		3.MD.6.: Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).
		3.MD.7(a): Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.
		3.MD.7(b): Multiply side lengths to find areas of rectangles with whole- number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.
		3.MD.7(d): Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.
25	Introduction to FractionsAdding Fractions	3.NF.1.: Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size 1/b.
	Subtracting FractionsEquivalent Fractions	3.NF.3(a): Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.
		3.NF.3(b): Recognize and generate simple equivalent fractions, e.g., $1/2 = 2/4$, $4/6 = 2/3$). Explain why the fractions are equivalent, e.g., by using a visual fraction model.
		3.NF.3(c): Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. Examples: Express 3 in the form $3 = 3/1$; recognize that $6/1 = 6$; locate $4/4$ and 1 at the same point of a number line diagram.
		3.G.2.: Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into 4 parts with equal area, and describe the area of each part as 1/4 of the area of the shape.

§	Content	Standards
26	Comparing Fractions • Improper Fractions Visually • Comparing Fractions Numerically • Comparing Fractions on a Number Line	 3.NF.1: Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size 1/b. 3.NF.2(a): Represent a fraction 1/b on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into b equal parts. Recognize that each part has size 1/b and that the endpoint of the part based at 0 locates the number 1/b on the number line. 3.NF.2(b): Represent a fraction a/b on a number line diagram by marking off a lengths 1/b from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line. 3.NF.3(a): Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line. 3.NF.3(b): Recognize and generate simple equivalent fractions, e.g., 1/2 = 2/4, 4/6 = 2/3). Explain why the fractions are equivalent, e.g., by using a visual fraction model. 3.NF.3(c): Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. Examples: Express 3 in the form 3 = 3/1; recognize that 6/1 = 6; locate 4/4 and 1 at the same point of a number line diagram. 3.NF.3(d): Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols >, =, or , and justify the conclusions, e.g., by using a visual fraction model. 3.G.2.: Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into 4 parts with equal area, and describe the area of each part as 1/4 of the area of the shape.
27	Equivalent Fractions and Story Problems • Complicating Fractions • Simplifying Fractions • Story Problems with Fractions • Story Problems with Fractions	 3.NF.1.: Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size 1/b. 3.NF.3(a): Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.
		3.NF.3(b): Recognize and generate simple equivalent fractions, e.g., $1/2 = 2/4$, $4/6 = 2/3$). Explain why the fractions are equivalent, e.g., by using a visual fraction model.
		3.NF.3(c): Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. Examples: Express 3 in the form $3 = 3/1$; recognize that $6/1 = 6$; locate $4/4$ and 1 at the same point of a number line diagram.
		3.G.2.: Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into 4 parts with equal area, and describe the area of each part as 1/4 of the area of the shape.

§	Content	Standards
28	Measuring Length Measuring in Inches and Feet Making a Line Plot Measuring with Halves and Fourths Line Plots with Halves and Fourths 	MP.4.: Model with mathematics. 3.MD.4.: Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units whole numbers, halves, or quarters.
29	Measuring Capacity • Estimating Capacity • Adding Units of Capacity • Capacity Story Problems • Customary Units	3.MD.2.: Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.
30	Measuring Weight and Temperature Customary Units in Weight Estimating Weight Adding Units of Weight Temperature 	3.MD.2.: Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.
31	Measuring Metric Length Metric Prefixes Metric Units of Length Converting Metric Units of Length Metric Units as Fractions & Decimals 	
32	Metric System Mass Capacity Estimating Mass and Capacity Story Problems 	3.MD.2.: Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.
33	Probability • Probability as a Fraction • Fairness • Likelihood of Events • Chances and Outcomes	