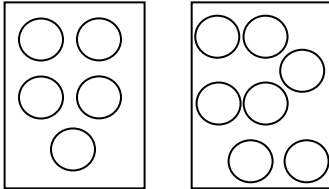
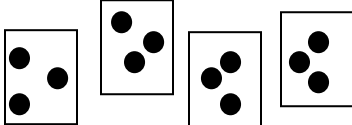


7th Grade - Mathematics				
Reporting Category	Standard	Essential Skills and Knowledge	Related Basic Skill or Concept	Sample Instructional Activities

Number, Number Sense, Computation and Estimation	7M-NSCE 1	The student will a) add fractions with like denominators (halves, thirds, fourths, and tenths) so the solution is less than or equal to one.	<ul style="list-style-type: none"> Name and identify fractional parts from a whole Recognize that shapes can be cut into equal and/or unequal parts Understand that equal parts can be added to make a whole 	<ul style="list-style-type: none"> Students should investigate addition with fractions, using a variety of models (e.g. fraction circles, fraction strips, rulers, linking cubes, pattern blocks).
	7M-NSCE 2	The student will a) solve multiplication problems with products to 100; b) solve division problems with divisors up to five and also with a divisor of 10 without remainders; c) demonstrate the value of various money amounts using decimals.	<ul style="list-style-type: none"> Understanding of repeated addition Make equal groups to find a total Multiply by powers of 10 Identify coins (penny, nickel, dime, quarter) and their values Understand that the size of the coin does not reflect the value of the coin 	<ul style="list-style-type: none"> Ask the students to model a multiplication problem by building equal groups give them two different choice mats they could use to build the problem. For example, you ask the student to find the product for 5×7. You could give them the choice to use a mat that has five circles or a mat that has seven circles and then solve the problem using the mat they chose. <div style="display: flex; justify-content: space-around; align-items: center;">  </div> <ul style="list-style-type: none"> Use egg cartons to find the product. If the multiplication problem is 5×9 have them use 5 of the dishes in the egg carton and place 9 chips or beans in each dish. Then count to find the product. Use a calculator and have the student use repeated addition to find the product. Give the students a division problem to solve. Have them identify the divisor and put out that many square pieces of paper in front of them. They should then count out enough counters for

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				<p>the dividend. Then the student should fair share the counters until they find the quotient.</p> <p>Ex. $4 \overline{)12}$ </p> <p align="center">The quotient would be 3.</p> <ul style="list-style-type: none"> Use repeated addition to find the quotient. The students would circle the number of groups subtracted from the total to find the quotient. <p>Ex. $15 \div 3$</p> $15 - \textcircled{3} = 12$ $12 - \textcircled{3} = 9$ $9 - \textcircled{3} = 6$ $6 - \textcircled{3} = 3$ $3 - \textcircled{3} = 0$ <p>Five groups of 3 were subtracted. The quotient would be 5.</p> <ul style="list-style-type: none"> Use dishes to find a quotient. If the students are finding the dividend for the quotient of $80 \div 10$, they could fair share 80 chips or beans in 10 of the dishes. Count each individual dish to identify the quotient. Use real money and have the students count collections of coins. Group like coins first (e.g. Give students a group of 8 dimes and have them count by 10s to find the total), then count groups of mixed coins.
	7M-NSCE 3	<p>The student will</p> <ol style="list-style-type: none"> use a ratio to model or describe a relationship; use the concept of equality with models to solve one-step addition 	<ul style="list-style-type: none"> Ability to count and compare amounts Exposure to the three ways to write ratios; 5:6, 5/6, or 5 to 6 	<ul style="list-style-type: none"> Show the students a picture and have them describe the relationship within a set (subset) by comparing part of the set (subset) to the entire set (e.g. Show them a picture of cats and dogs. There might be 3 cats and 7 dogs. Looking at the cats, the picture shows 3:7).

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		and subtraction equations.		<ul style="list-style-type: none"> Develop the concept of one-step addition and subtraction equations with counters, ex: <p>1) $x + 3 = 5$</p> <p>Model: $x + \text{●●●} = \text{●●●●●}$</p> <p>$x + \text{●●●} - \text{●●●} = \text{●●●●●} - \text{●●●}$</p> <p>$x + 0 = 5 - 3$</p> <p>$x = 2$</p> <p>2) $x - 2 = 5$</p> <p>Model: $x - \text{●●} = \text{●●●●●}$</p> <p>$x - \text{●●} + \text{●●} = \text{●●●●●} + \text{●●}$</p> <p>$x + 0 = 5 + 2$</p> <p>$x = 7$</p>
Measurement and Geometry	7M-MG 1	The student will a) find the area of a rectangle given the length and width using a model.	<ul style="list-style-type: none"> Counting square tiles to find area Understanding that area is a measure to cover a surface 	<ul style="list-style-type: none"> Determine the area of a given surface by estimating and then counting the number of square units needed to cover the surface. Relate the square units to the length and width of the rectangle. Give students various rectangles where the length and the width are labeled with lengths. Have the students determine the area using tiles, repeated addition, and/or multiplication.

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	7M-MG 2	The student will a) draw or classify and recognize basic two-dimensional geometric shapes without a model (circle, triangle, rectangle/ square).	<ul style="list-style-type: none"> Identify figures Describe figures Understand similarities and differences between figures 	<ul style="list-style-type: none"> Give students cards that read triangle, circle, rectangle/square and have them sort shape pictures with the correct word. Have students trace the shapes of geometric solids and name the shapes of faces they traced. Given a straight edge, have the students draw a triangle, rectangle, or square. Have students choose two triangles out of a group of 5 figures.
Probability, Statistics, Patterns, Functions, and Algebra	7M-PSPFA 1	The student will a) describe the probability of events occurring as possible or impossible.	<ul style="list-style-type: none"> Understanding of the words possible and impossible 	<ul style="list-style-type: none"> Read situations to the students. Have them tell you or point to the word if the event is possible or impossible. This activity could also be done as a sort.
	7M-PSPFA 2	The student will a) use the relationship within addition and/or multiplication to illustrate that two expressions are equivalent.	<ul style="list-style-type: none"> Understanding of equivalency, $7 = 7$ Understand the = sign doesn't mean the answer, but means both sides of the equation are the same value Understand that changing the order of the addends does not affect the sum (e.g. $4 + 3 = 3 + 4$) 	<ul style="list-style-type: none"> Use number balances to display equivalent expressions (e.g. A student might place a chip on 3 and 4 on the left side of the balance and a chip on 1 and 6 on the right side of the balance.). Use number balances and have the students find different ways to make 10 on both sides of the number balance (e.g. $7+3 = 5+5$). Give the students several different number sentences and have them identify if the number sentence is equivalent or not equivalent (e.g. $5+6 = 10 + 1$ is equivalent, $3 \times 2 = 6 \times 0$ is not equivalent). Have the students create number sentences that show the commutative property. Give them a number sentence and give them two choices to so they can build an expression that shows the commutative property.

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	7M-PSPFA 3	The student will a) compare fractions to fractions and decimals to decimals using rational numbers less than one.	<ul style="list-style-type: none">• Understand the larger the denominator, the smaller the piece and the smaller the denominator, the larger the piece• Understand decimal place value• Some fractions and decimals are read the same, but written differently (e.g. $1/10 = 0.1$)• Relate fractions to decimals	<ul style="list-style-type: none">• Have students compare $1/2$ to $1/3$ using fraction cards, fraction circles, or fraction bars.• Give students two different decimal grids and have them write the decimal that is represented by the grid, then have them compare the two amounts.