

Standards for Mathematical Practice

and Excel Math Grade 6

The Common Core State Standards for Mathematical Practice are integrated into Excel Math lessons. Below are some examples of how we include these Practices into the tasks and activities your students will complete throughout the year.

Mathematical Practices (see page 9 for practices by lesson #)

1. Make sense of problems and persevere in solving them. Mathematically proficient students solve real world problems through the application of algebraic and geometric concepts. These problems involve ratio, rate, area and statistics. Students seek the meaning of a problem and look for efficient ways to represent and solve it. They may check their thinking by asking themselves, "Does this make sense?" "What is the most efficient way to solve this problem?" and "Can I solve the problem a different way?" They check their answers using a different method.

2. Reason abstractly and quantitatively. Mathematically proficient students represent a wide variety of real world contexts through the use of real numbers and variables in mathematical expressions, equations and inequalities. Students contextualize to understand the meaning of the number or variable as related to the problem and decontextualize to manipulate symbolic representations by applying properties of operations.

3. Construct viable arguments and critique the reasoning of others. In Sixth Grade, mathematically proficient students construct arguments using verbal or written explanations accompanied by expressions, equations, inequalities, models, and graphs, tables, and other data displays (i.e. dot plots, histograms, etc.). They critically evaluate their own thinking and the thinking of others. Students ask questions such as, "How did you get that?" and "Why is that true?" They explain their thinking to others and respond to others' reasoning and strategies.

4. Model with mathematics. In Sixth Grade, students model problems symbolically, tabularly, graphically and contextually. They form expressions, equations or inequalities from real world contexts and connect symbolic and graphical representations. Student use number lines to represent inequalities and use measures of center and variability and data displays (e.g. histograms) to compare data sets. They explain the connections between representations.

5. Use appropriate tools strategically. Mathematically proficient students consider available tools when solving a problem and decide when certain tools might be helpful. For example, they may represent figures on the coordinate plane to calculate area. Students might use physical objects or drawings to construct nets and calculate the surface area of three-dimensional figures.

6. Attend to precision. Mathematically proficient Sixth Grade students use clear and precise language in discussions. They use appropriate terminology when referring to rates, ratios, geometric figures, data displays and components of expressions, equations or inequalities. For example, when calculating the volume of a rectangular prism they use cubic units.

7. Look for and make use of structure. Mathematically proficient students carefully look for patterns and structure. Students recognize patterns that exist in ratio tables recognizing both the additive and multiplicative properties. Students compose and decompose two- and three-dimensional figures to solve real world problems involving area and volume.

8. Look for and express regularity in repeated reasoning. Mathematically proficient students use repeated reasoning to understand algorithms. They divide multi-digit numbers and perform operations with multi-digit decimals. They make models to show $a/b \div c/d = ad/bc$.

Standards / Objectives	Excel Math Lesson Numbers	Stretch Lesson Numbers Activity Numbers
Ratios and Proportional Relationships		
Understand ratio concepts and use ratio reasoning to solve problems.		
1. Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities.	*10, *11, 18, 22, 29, 34, 40, 41, 42, 43, 66, 89, 90, 94, 97, 99, 117, 137, 141, 151, 154	*13, 43, 50, 52, 54, 119, 131, 144, 147 Activity 2, 7
2. Understand the concept of a unit rate a/b associated with a ratio $a:b$ with $b \neq 0$, and use rate language in the context of a ratio relationship.	8, *10, *11, 29, 34, 40, 41, 42, 43, 66, 69, 72, 89, 94, 97, 99, 104, 117, 137, 141, 151, 152, 154	18, 144, 150 Activity 2, 14, 17
3. Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.		
a. Make tables of equivalent ratios relating quantities with whole number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.	8, *10, *11, 18, 22, 29, 40, 41, 43, 69, 89, 90, 94, 97, 99, 117, 137, 141, 151	*13, 43, 52 Activity 7
b. Solve unit rate problems including those involving unit pricing and constant speed. For example, if it took 7 hours to mow 4 lawns, then at that rate, how many lawns could be mowed in 35 hours? At what rate were lawns being mowed?	8, *10, *11, 22, 29, 40, 41, 42, 43, 69, 72, 89, 94, 96, 104, 117, 137, 141, 151, 152, 154	18, 150 Activity 14, 17
c. Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means $30/100$ times the quantity); solve problems involving finding the whole, given a part and the percent.	44, 52, 67, 71, 90, 94, 97, 98, 99, 105, 110, 111, 116, 117, 127, 129, 133, 135, 140	48, 143, 147, 152 Activity 1, 17
d. Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.	*10, *11, *18, 22, 29, 34, 40, 41, 43, 69, 89, 94, 97, 99, 117, *126, 137, 141, 151, 154	*13, 39, 43, 44, 52, 54, *74, *84, *111, 150 Activity 1, 7

Standards / Objectives	Excel Math Lesson Numbers	Stretch Lesson Numbers Activity Numbers
The Number System		
Apply and extend previous understandings of multiplication and division to divide fractions by fractions.		
<p>1. Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem. For example, create a story context for $(\frac{2}{3}) \div (\frac{3}{4})$ and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that $(\frac{2}{3}) \div (\frac{3}{4}) = \frac{8}{9}$ because $\frac{3}{4}$ of $\frac{8}{9}$ is $\frac{2}{3}$.</p>	<p>18, 19, 27, 46, 48, 57, 67, 87, 93, 99, 103, 106, 112, 113, 118, 120, 142, 153</p> <p>Fraction knowledge 5, 19, 22, 35, 78, 83, 87, 99</p> <p>Multiply fractions 18, 58, 85, 101, 104, 105, 111, 112, 117</p> <p>Add / Subtract fractions 28, 39, 93, 106, 146</p> <p>Reciprocals 101</p>	<p>General fractions 2, 12</p> <p>Add / Subtract fractions 49, 96, 104</p>
Compute fluently with multi-digit numbers and find common factors and multiples.		
<p>2. Fluently divide multi-digit numbers using the standard algorithm.</p>	<p>1, 6, 9, 16, 17, 19, 24, 26, 38, 41, 62, 81, 82, 89, 92, 96, 103, 107, 120, 128, 132, 134, 136, 140, 147, 154</p> <p>Multiply 1, 6, 12, 24, 37, 122</p>	<p>5, 7, 22, 25, 28, 38, 42, 44, 69, 76, 77, 78, 82, 87, 89, 98, 102, 111, 115, 130, 143, 155</p> <p>Multiply 28, 31</p> <p>Activity 14, 17</p>
<p>3. Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.</p>	<p>1, 7, 12, 18, 31, 35, 40, 42, 46, 49, 51, 52, 53, 61, 69, 71, 72, 79, 81, 86, 95, 96, 102, 108, 110, 111, 113, 120, 122, 128, 129, 132, 133, 138, 140, 150, 151</p> <p>Compare / Order 73, 74</p>	<p>38, 44, 46, 84, 85, 89, 94, 150</p> <p>Activity 14, 17</p>
<p>4. Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor. For example, express $36 + 8$ as $4(9 + 2)$.</p>	<p>13, 17, 26, 37, 50, 56, 64</p> <p>Factor / Prime / Multiples 26, 50, 64</p>	<p>*31, 67, 90, 92, 99, 139</p> <p>Prime / Multiples 72, 88</p>

*Gives opportunity to teach specific Standard

Standards / Objectives	Excel Math Lesson Numbers	Stretch Lesson Numbers Activity Numbers
Apply and extend previous understandings of numbers to the system of rational numbers.		
5. Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.	10, 25, 63, 73, 74, 80, 109, 119, 123, 128, 130, 131, 143, 144, 145, 155	Activity 3
6. Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates.		
a. Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g., $-(-3) = 3$, and that 0 is its own opposite.	25, 63, 73, 74, 80, 109, 119, 123, 128, 130, 131, 143, 144, 145, 155	Activity 3
b. Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes.	25, 32, 36, *68, 76, 80, 109, 115	Activity 8
c. Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane.	25, 32, 36, 63, 68, 74, 76, 80, 109, 115, 119, 130, 145	23, 29, 81 Activity 3, 8
7. Understand ordering and absolute value of rational numbers.		
a. Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram. For example, interpret $-3 > -7$ as a statement that -3 is located to the right of -7 on a number line oriented from left to right	*10, 25, *47, *53, 63, 80, *109, *119, 123, 128, 130	*23, *29, *36 Activity 3
b. Write, interpret, and explain statements of order for rational numbers in real-world contexts. For example, write $-3^{\circ}\text{C} > -7^{\circ}\text{C}$ to express the fact that -3°C is warmer than -7°C .	*10, *22, 47, *53, 63, 73, 74, *109, *119, 123, 130	75, 81
c. Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation.	3, *10, 25, 63, 74, 80, *109, 115, *119, 123, 128, 130	23, 29, 36 Activity 3, 8
d. Distinguish comparisons of absolute value from statements about order. For example, recognize that an account balance less than -30 dollars represents a debt greater than 30 dollars	*10, 63, 73, *109, 119, 123, 128, 130	23, 29, 36 Activity 3
8. Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.	25, 30, 32, 33, *36, *68, *76, 80, *109, *115	Activity 8, 11

*Gives opportunity to teach specific Standard

Standards / Objectives	Excel Math Lesson Numbers	Stretch Lesson Numbers Activity Numbers
Expressions and Equations		
Apply and extend previous understandings of arithmetic to algebraic expressions.		
1. Write and evaluate numerical expressions involving whole-number exponents.	77, 102, 112	*75, 141 Activity 9
2. Write, read, and evaluate expressions in which letters stand for numbers.		
a. Write expressions that record operations with numbers and with letters standing for numbers. For example, express the calculation “Subtract y from 5” as $5 - y$.	3, *5, *6, *7, *8, 13, 29, 37, 39, 40, 42, 48, 54, 57, 61, 77, 84, 85, 89, 91, 96, 100, 114, 115, 116, 133	2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 16, 17, 18, 21, 22, 24, 26, 27, 28, 30, 32, 37, 38, 39, 42, 46, 60, 62, 65, 68, 69, 70, 73, 74, 75, 76, 81, 82, 83, 86, 87, 91, 96, 101, 103, 104, 110, 113, 117, 123, 124, 128, 132, 133, 142, 154 Activity 6
b. Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity.	3, 5, 6, 7, 8, 13, 29, 37, 39, 40, 42, 48, 54, 57, 61, 77, 84, 85, 89, 91, 96, 100, 102, 114, 115, 116, 133	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 15, 16, 17, 18, 20, 21, 22, 24, 26, 27, 28, 30, 32, 37, 38, 39, 42, 46, 60, 62, 65, 68, 69, 70, 73, 74, 75, 76, 81, 82, 83, 86, 87, 91, 96, 101, 103, 104, 110, 113, 117, 123, 124, 128, 132, 133, 142, 154 Activity 6, 9, 10, 17
c. Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations).	3, 5, 6, 7, *8, 13, 29, 37, 40, 42, 48, 54, *61, 77, 84, 85, 89, 91, 96, 100, 114, 115, 116, 133	2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 17, 18, 20, 21, 22, 24, 26, 27, 28, 30, 32, 37, 38, 39, 42, 46, 60, 62, 65, 68, 69, 70, 73, 74, 75, 76, 82, 91, 101, 104, 124, 154 Activity 9, 10, 17
3. Apply the properties of operations to generate equivalent expressions.	3, 5, 6, 7, 8, 13, 29, 37, 39, 40, 42, 48, 54, 57, 61, 77, 84, 85, 89, 89, 91, 96, 100, 102, 114, 115, 116, 133	2, 3, 5, 12, 16, 20, 21, 22, 27, 28, 37, 38, 39, 41, 42, 46, 49, 62, 65, 68, 69, 70, 73, 74, 75, 76, 81, 82, 83, 91, 96, 101, 103, 104, 123, 124, 132 Activity 9, 10, 17
4. Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them). For example, the expressions $y + y + y$ and $3y$ are equivalent because they name the same number regardless of which number y stands for.	3, 5, 7, 8, 37, 39, 40, 48, 54, 57, 61, 77, 84, 85, 89, 89, 91, 96, 100, 114, 115, 116, 133	5, *10, 12, 16, 21, 22, 27, 28, 38, 39, 41, 42, 46, 49, 62, 68, 69, 70, 73, 75, 81, 82, 86, 101, 103, 113, 117 Activity 9, 10, 17

Standards / Objectives	Excel Math Lesson Numbers	Stretch Lesson Numbers Activity Numbers
Reason about and solve one-variable equations and inequalities.		
5. Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true.	1, 3, 5, 6, 7, 8, 13, 29, 37, 39, 40, 42, 48, 61, 84, 85, 89, 94, 96, 100, 114, 115, 116, 133	1, 2, 3, 6, 7, 10, 12, 13, 15, 16, 17, 20, 21, 22, 24, 26, 28, 37, 38, 39, 41, 42, 46, 49, 65, 68, 69, 70, 73, 74, 75, 76, 81, 82, 87, 96, 101, 103, 104, 110, 124 Activity 6, 9, 10, 17
6. Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.	3, 5, *6, 7, 29, *37, 39, 40, 42, 54, *58, 61, 84, 89, 96, 100, 114, *116, 115, 133	2, 3, 5, 6, 7, 10, 12, 13, *15, 16, 17, 20, 21, *24, 26, 28, *37, 38, 39, *42, *46, 62, 65, 68, 69, 70, 73, 74, 75, 76, 81, 83, 87, 96, 101, 103, 110, 117, 128, 133, 142
7. Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p , q and x are all nonnegative rational numbers.	1, 3, 5, 6, 7, *8, 13, 29, 31, 39, 40, 42, *58, *69, 85, 89, *94, 96, 100, 114, 115, *116, 133	2, 3, *4, 7, *10, 12, 13, 16, 17, 20, 21, 24, 26, 28, *37, *38, 39, 41, 42, *46, *65, *68, *69, *82, *91 Activity 17
8. Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form $x > c$ or $x < c$ have infinitely many solutions; represent solutions of such inequalities on number line diagrams.	*47, 74	2, 3, 16, 23, 29, 36 Activity 3
Represent and analyze quantitative relationships between dependent and independent variables		
9. Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation.	8, 40, 57, *69, 70, 84, *94, 96, 100, *115, 116, 133	4, *5, 69, 70, 75, 76, 81 Activity 11

Standards / Objectives	Excel Math Lesson Numbers	Stretch Lesson Numbers Activity Numbers
Geometry		
Solve real-world and mathematical problems involving area, surface area, and volume.		
1. Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.	30, 75, 76, 80, 121, 124, 148 Perimeter 30, 75 (Irregular Figures) Angles 33, 88	28, 39, *45, *53, 56, 63, *71, 77, *84, 108 Activity 4, 5, 6, 7, 10 Perimeter 55, Activity 3
2. Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas $V = lwh$ and $V = bh$ to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.	10, 59, 108, 139	39, 59, *118 Activity 9 Range / Velocity Activity 17
3. Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems.	*14, 25, 30, 32, 33, 36, 80, 76, 109, 145, *148	*84 Activity 5, 6, 8, 9
4. Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.	15, 59, 100 Two-Dimensional 14, 21, 23, 60, 121, 125	*59, *118 Activity 7, 9, 10 Two-Dimensional 14, 71, 116, 129

Standards / Objectives	Excel Math Lesson Numbers	Stretch Lesson Numbers Activity Numbers
Statistics and Probability		
Develop understanding of statistical variability.		
1. Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers.	2, 10, *20, 34, 45, 55, 65, 70, 120, 150	33, 43, 47, 52, 79, 89, 97, 135, 136, 138, 147, 149 Activity 11, 12, 13, 14, 15
2. Understand that a set of data collected to answer a statistical question has a distribution, which can be described by its center, spread, and overall shape.	2, 10, *20, 34, 45, 55, 65, 70, 120, 150	33, 43, 47, 52, 79, 89, 97, 135, 136, 138, 147, 149 Activity 11, 12, 13, 14, 15, 16
3. Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number.	*2, *20, 34, 45, 55, 65, 70, 120, 150	33, 43, 47, 52, 79, 89, 97, 135, 136, 138, 149 Activity 11, 12, 13, 14, 15, 16
Summarize and describe distributions.		
4. Display numerical data in plots on a number line, including dot plots, histograms, and box plots.	2, 34, 45, 65, 70, *99, 115, 150	33, 43, 47, 52, 79, 89, 97, 135, 136, 138 Activity 11, 12, 13, 14, 15
5. Summarize numerical data sets in relation to their context, such as by:		
a. Reporting the number of observations.	2, 34, 45, 65, 70, 99, 150	19, *33, 43, 47, 52, 79, 89, 97, 135, 138 Activity 11, 12, 13, 15, 16
b. Describing the nature of the attribute under investigation, including how it was measured and its units of measurement	2, 34, 45, 65, 70, 99, 150	*33, 43, 47, 52, 89, 97, 135, 136, 138 Activity 11, 12, 13, 14, 15, 16
c. Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.	2, 34, 45, 55, 65, 70, 99, 120, 150	33, 43, 47, 52, 79, 89, 97, 135, 136, 138 Activity 11, 12, 13, 14, 15, 16
d. Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.	2, 34, 45, 65, 70, 99, 150	33, 43, 47, 52, 79, 89, 97, 135, 136, 138 Activity 11, 12, 13, 14, 15, 16

*Gives opportunity to teach specific Standard

Standards / Objectives	Excel Math Lesson Numbers	Stretch Lesson Numbers Activity Numbers
Mathematical Practices		
1. Make sense of problems and persevere in solving them.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13, 17, 19, 20, 29, 31, 33, 34, 39, 40, 41, 42, 43, 58, 63, 67, 69, 70, 72, 75, 79, 84, 86, 87, 89, 92, 94, 96, 97, 98, 99, 105, 108, 110, 114, 116, 117, 120, 127, 133, 137, 141, 149, 150, 151, 153, 154	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16, 17, 18, 19, 20, 21, 22, 24, 25, 26, 28, 30, 31, 32, 33, 34, 35, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 50, 51, 52, 54, 55, 57, 58, 60, 61, 64, 65, 67, 68, 69, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 87, 88, 89, 90, 91, 92, 93, 94, 95, 97, 99, 100, 101, 102, 104, 105, 106, 107, 110, 111, 112, 114, 115, 120, 122, 124, 126, 127, 134, 135, 136, 137, 138, 139, 140, 143, 145, 146, 147, 148, 149, 150, 151, 152, 154 Activity 1, 2, 11, 12, 13, 14, 15, 16, 18
2. Reason abstractly and quantitatively.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13, 17, 19, 20, 29, 31, 33, 34, 39, 40, 41, 42, 43, 58, 63, 67, 69, 70, 72, 75, 79, 84, 86, 87, 89, 92, 94, 96, 97, 98, 99, 105, 108, 110, 114, 116, 117, 120, 127, 133, 137, 141, 149, 150, 151, 153, 154	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16, 17, 18, 19, 20, 21, 22, 24, 25, 26, 28, 30, 31, 32, 33, 34, 35, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 50, 51, 52, 54, 55, 57, 58, 60, 61, 64, 65, 67, 68, 69, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 87, 88, 89, 90, 91, 92, 93, 94, 95, 97, 99, 100, 101, 102, 104, 105, 106, 107, 110, 111, 112, 114, 115, 120, 122, 124, 126, 127, 134, 135, 136, 137, 138, 139, 140, 143, 145, 146, 147, 148, 149, 150, 151, 152, 154 Activity 1, 2, 11, 12, 13, 14, 15, 16, 18
3. Construct viable arguments and critique the reasoning of others.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13, 17, 19, 20, 29, 31, 33, 34, 39, 40, 41, 42, 43, 58, 63, 67, 69, 70, 72, 75, 79, 84, 86, 87, 89, 92, 94, 96, 97, 98, 99, 105, 108, 110, 114, 116, 117, 120, 127, 133, 137, 141, 149, 150, 151, 153, 154	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16, 17, 18, 19, 20, 21, 22, 24, 25, 26, 28, 30, 31, 32, 33, 34, 35, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 50, 51, 52, 54, 55, 57, 58, 60, 61, 64, 65, 67, 68, 69, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 87, 88, 89, 90, 91, 92, 93, 94, 95, 97, 99, 100, 101, 102, 104, 105, 106, 107, 110, 111, 112, 114, 115, 120, 122, 124, 126, 127, 134, 135, 136, 137, 138, 139, 140, 143, 145, 146, 147, 148, 149, 150, 151, 152, 154 Activity 1, 2, 11, 12, 13, 14, 15, 16, 18

Standards / Objectives	Excel Math Lesson Numbers	Stretch Lesson Numbers Activity Numbers
4. Model with mathematics.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13, 16, 17, 19, 20, 24, 26, 27, 29, 31, 33, 34, 36, 39, 40, 41, 42, 43, 48, 50, 55, 56, 58, 63, 64, 65, 67, 69, 72, 75, 79, 84, 86, 87, 89, 90, 92, 94, 96, 97, 98, 99, 105, 108, 110, 114, 115, 116, 117, 120, 127, 130, 131, 132, 133, 137, 141, 143, 144, 149, 150, 151, 153, 154	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 15, 16, 17, 18, 20, 21, 22, 24, 25, 26, 27, 28, 30, 31, 32, 35, 37, 38, 39, 41, 42, 44, 46, 47, 48, 50, 52, 54, 55, 56, 59, 60, 63, 65, 67, 68, 69, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 85, 87, 88, 89, 90, 91, 92, 93, 94, 95, 97, 99, 101, 102, 104, 110, 111, 115, 120, 123, 124, 126, 130, 135, 140, 138, 139, 143, 146, 147, 148, 149, 150, 152, 154 Activity 1, 2, 11, 12, 13, 14, 15, 16, 18
5. Use appropriate tools strategically.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13, 17, 19, 20, 29, 31, 33, 34, 39, 40, 41, 42, 43, 58, 63, 67, 69, 70, 72, 75, 79, 84, 86, 87, 89, 92, 94, 96, 97, 98, 99, 105, 108, 110, 114, 116, 117, 120, 127, 133, 137, 141, 149, 150, 151, 153, 154	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16, 17, 18, 19, 20, 21, 22, 24, 25, 26, 28, 30, 31, 32, 33, 34, 35, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 50, 51, 52, 54, 55, 57, 58, 60, 61, 64, 65, 67, 68, 69, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 87, 88, 89, 90, 91, 92, 93, 94, 95, 97, 99, 100, 101, 102, 104, 105, 106, 107, 110, 111, 112, 114, 115, 120, 122, 124, 126, 127, 134, 135, 136, 137, 138, 139, 140, 143, 145, 146, 147, 148, 149, 150, 151, 152, 154 Activity 1, 2, 11, 12, 13, 14, 15, 16, 18
6. Attend to precision.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13, 17, 19, 20, 29, 31, 33, 34, 39, 40, 41, 42, 43, 58, 63, 67, 69, 70, 72, 75, 79, 84, 86, 87, 89, 92, 94, 96, 97, 98, 99, 105, 108, 110, 114, 116, 117, 120, 127, 133, 137, 141, 149, 150, 151, 153, 154	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16, 17, 18, 19, 20, 21, 22, 24, 25, 26, 28, 30, 31, 32, 33, 34, 35, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 50, 51, 52, 54, 55, 57, 58, 60, 61, 64, 65, 67, 68, 69, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 87, 88, 89, 90, 91, 92, 93, 94, 95, 97, 99, 100, 101, 102, 104, 105, 106, 107, 110, 111, 112, 114, 115, 120, 122, 124, 126, 127, 134, 135, 136, 137, 138, 139, 140, 143, 145, 146, 147, 148, 149, 150, 151, 152, 154 Activity 1, 2, 11, 12, 13, 14, 15, 16, 18



6th Grade Common Core Standards / *Excel Math* Correlation

Standards / Objectives	Excel Math Lesson Numbers	Stretch Lesson Numbers Activity Numbers
7. Make sense of problems and persevere in solving them.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13, 17, 19, 20, 29, 31, 33, 34, 39, 40, 41, 42, 43, 58, 63, 67, 69, 70, 72, 75, 79, 84, 86, 87, 89, 92, 94, 96, 97, 98, 99, 105, 108, 110, 114, 116, 117, 120, 127, 133, 137, 141, 149, 150, 151, 153, 154	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16, 17, 18, 19, 20, 21, 22, 24, 25, 26, 28, 30, 31, 32, 33, 34, 35, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 50, 51, 52, 54, 55, 57, 58, 60, 61, 64, 65, 67, 68, 69, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 87, 88, 89, 90, 91, 92, 93, 94, 95, 97, 99, 100, 101, 102, 104, 105, 106, 107, 110, 111, 112, 114, 115, 120, 122, 124, 126, 127, 134, 135, 136, 137, 138, 139, 140, 143, 145, 146, 147, 148, 149, 150, 151, 152, 154 Activity 1, 2, 11, 12, 13, 14, 15, 16, 18
8. Reason abstractly and quantitatively.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13, 17, 19, 20, 29, 31, 33, 34, 39, 40, 41, 42, 43, 58, 63, 67, 69, 70, 72, 75, 79, 84, 86, 87, 89, 92, 94, 96, 97, 98, 99, 105, 108, 110, 114, 116, 117, 120, 127, 133, 137, 141, 149, 150, 151, 153, 154	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16, 17, 18, 19, 20, 21, 22, 24, 25, 26, 28, 30, 31, 32, 33, 34, 35, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 50, 51, 52, 54, 55, 57, 58, 60, 61, 64, 65, 67, 68, 69, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 87, 88, 89, 90, 91, 92, 93, 94, 95, 97, 99, 100, 101, 102, 104, 105, 106, 107, 110, 111, 112, 114, 115, 120, 122, 124, 126, 127, 134, 135, 136, 137, 138, 139, 140, 143, 145, 146, 147, 148, 149, 150, 151, 152, 154 Activity 1, 2, 11, 12, 13, 14, 15, 16, 18

The following are concepts not required by the CCS but are lessons in Excel Math. Alternate Common Core Lessons and Activities are provided in the Teacher Edition:

Concept	Lessons	Stretches
Calendar / days / time	4, 13, 41, 43, 92	21, 60, 65, 91, 120, 154
Fraction knowledge	5, 19, 78, 83, 87, 99	2, 12
Multiply fractions	18, 85, 101, 104, 111, 112, 117	
Add / Subtract fractions	28, 39, 93, 106, 146	49, 96, 104
Reciprocals	101	
Factor / Prime / Multiples	26, 50, 64	67, 72, 88
Deductive Reasoning	7	11, 105, 134, 137, 145, 146, 148
Combinations / Possibilities	34	19, 64, 40, 80
Measurement	10, 11, 29	
Geometry	14, 21, 23, 60, 121, 125 Perimeter 30, 75 (irregular figures) Angles 80, 88	14 Perimeter 55, Activity 3
Patterns	21, 33, 84, 100, 149	13, 15, 26, 30, 51, 57, 58, 61, 64, 94, 104, 109, 121, 125, 140, 151

*Gives opportunity to teach specific Standard



Common Core 6th Grade Standards / Excel Math Correlation by Lesson Number

Lesson (Activity) Number	Excel Math Lesson Objective	Common Core Standard
L1	Recognizing numbers less than a million given in words or place value; recognizing ordinal number words up to 100; adding, subtracting and multiplying whole numbers or money amounts with regrouping; recognizing multiples; selecting the correct equation; solving multi-step word problems using addition, subtraction and multiplication with regrouping; calculating change using the least number of coins; recognizing money number words; recognizing addition and subtraction fact families	Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L2	Comparing two or more sets of data using bar or line graphs; interpreting information given in a histogram; recognizing the symbols $<$ less than and $>$ greater than; filling in missing numbers in sequences counting by numbers from 1 to 12; arranging 4 four-digit numbers in order from least to greatest and greatest to least; selecting the correct symbol for a number statement	Statistics / Probability 4, 5a, 5b, 5c, 5d Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L3	Recognizing true and not true number statements; using trial and error to solve for unknowns in an equation; solving algebraic equations with and without parentheses; changing a number statement from \neq to $=$; learning the order of operations when solving an equation	Expressions / Equations 2a, 2c, 8 Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L4	Computing the date within the month; learning the abbreviations for days and months; learning 7 days = 1 week; learning 1 year = 12 months; learning the number of days in each month	Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L5	Defining numerator and denominator; determining the fractional part of a group of items when modeled or given in words, sometimes with extraneous information and the word “not”; learning that the whole is the sum of its parts; adding and subtracting fractions and mixed numbers with like denominators	Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L6	Recognizing multiplication and division fact families; learning division facts with dividends up through 81 and dividends that are multiples of 10 (to 90), 11 (to 99) or 12 (to 96); dividing a one-digit divisor into a three-digit dividend with a two- or three-digit quotient with no regrouping or remainders; solving multi-step word problems involving division; learning the terminology for multiplication and division	Number System 2 Expressions / Equations 2b Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L7	Solving word problems using deductive reasoning; determining if there is sufficient information to answer the question in a word problem; determining what information is needed to answer the question in a word problem	Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L8	Solving word problems by listing possibilities or by making a chart	Expressions / Equations *2a, 2b, *2c, 3, 4, 5, *7, 9 Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L9	Learning division facts with remainders with dividends up through 81; solving word problems involving division with remainders	Number System 2 Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8

*Gives opportunity to teach specific State Standard



**Common Core 6th Grade Standards /
Excel Math Correlation by Lesson Number**

Lesson (Activity) Number	Excel Math Lesson Objective	Common Core Standard
L10	Estimating measurements; measuring temperature; learning measurement equivalents for length, weight, volume: feet, inches, yards, centimeters, meters, kilometers, grams, kilograms, liters, milliliters, millimeters, quarts, gallons, ounces, pounds and tons; converting measurements using multiplication or division; determining the measurement that is longer or shorter or heavier or lighter	Number System *7b Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L11	Measuring line segments to the nearest half inch, quarter inch and half centimeter; comparing U.S. customary and metric units	
L12	Multiplying by a two-digit multiplier	
L13	Learning 60 minutes = 1 hour; telling time to the minute; calculating minutes before the hour; calculating elapsed time (hours) involving AM and PM; recognizing a quarter past or before the hour and half past the hour	Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L14	Learning the terminology of parallel, intersecting and perpendicular lines, plane figure, polygon, quadrilateral, parallelogram, rectangle, square, diagonal, rhombus and trapezoid	
L15	Recognizing three-dimensional figures - sphere, cube, cone, cylinder, rectangular, square and triangular pyramids and rectangular and triangular prisms; learning the terminology of flat and curved faces, bases, edges and vertices	Geometry 4
L16	Dividing a one-digit divisor into a three-digit dividend with a two-digit quotient with regrouping and remainders	Number System 2 Mathematical Practices 4
L17	Determining the lowest common multiple; learning division and multiplication facts with products with 11 (to 121) or 12 (to 144) as a factor	Number System 4 Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L18	Determining equivalent fractions using models, money, multiplication or division	Number System 1
L19	Computing $\frac{1}{2}$ to $\frac{1}{9}$ of a group of items; recognizing odd and even numbers less than 1,000	Number System 2 Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L20	Rounding to the nearest ten, hundred or thousand; estimating the answers for addition, subtraction and multiplication word problems using rounding to the nearest ten, hundred or thousand; estimating range for an answer; rounding numbers so there is only one non-zero digit	Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L21	Recognizing patterns; learning the terminology of pentagon, hexagon and octagon; determining figures that do or do not belong in a set	
L22	Putting simple fractions in order from least to greatest and greatest to least; determining the fraction with the greatest or least value in a set of fractions	Number System *7b

*Gives opportunity to teach specific State Standard



Common Core 6th Grade Standards / Excel Math Correlation by Lesson Number

Lesson (Activity) Number	Excel Math Lesson Objective	Common Core Standard
L23	Recognizing similar and congruent figures; recognizing flips, slides and turns; recognizing lines of symmetry; recognizing bilateral and rotational symmetry	
L24	Recognizing numbers up through trillions given in words or place value; recognizing numbers given in expanded notation	Mathematical Practices 4
L25	Learning the sum of the angles of a rectangle; recognizing right, obtuse and acute angles; measuring and estimating angles; recognizing equilateral, isosceles and scalene triangles; learning the sum of the angles of a triangle	Geometry 1
L26	Dividing a two-digit divisor into a dividend less than 100 with remainders	Number System 2 Mathematical Practices 4
L27	Converting an improper fraction to a mixed or whole number; determining the fraction with the greatest or least value in a set of fractions	Number System 1 Mathematical Practices 4
L28	Adding and subtracting fractions with unlike denominators	
L29	Reading maps drawn to scale	Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L30	Calculating the area and perimeter of a rectangle; solving word problems involving area and perimeter	Geometry 1
L31	Dividing dollars by dollars	Number System 3 Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L32	Determining coordinate points	Number System 6b, 6c
L33	Recognizing the pattern in a sequence of figures or pattern of shading; solving for an unknown angle in a triangle	Geometry 1 Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L34	Determining the probability of an event; comparing probabilities	Number System 6b, 6c Statistics / Probability 1, 2, 3, 4, 5a, 5b, 5c, 5d Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L35	Recognizing tenths and hundredths places; writing mixed numbers as decimal numbers; writing decimal numbers as mixed numbers; recognizing decimal number words; adding and subtracting decimal numbers	Number System 3
L36	Calculating the length of vertical and horizontal lines by subtracting x- and y-coordinates	Mathematical Practices 4
L37	Learning the Distributive Property of Multiplication; learning the Associative Property of Multiplication and Addition; learning the Commutative Property of Addition and Multiplication	Number System 4 Expressions / Equations 2a, 2b, 2c, 3, 4, 5, *6
L38	Dividing a one-digit divisor into a four-digit dividend with a three-digit quotient; learning the Property of One and the Zero Property	Number System 2
L39	Adding and subtracting fractions in word problems	Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L40	Recognizing multiplication without the "x" symbol; calculating answers to word problems using 2 to 1 and 5 to 1 ratios	Ratios / Proportional Relationships 2, 3a, 3b Expressions / Equations *1, 2a, 2b, 2c, 3, 4, 5, 6, 7, 9 Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8

*Gives opportunity to teach specific State Standard



Common Core 6th Grade Standards / Excel Math Correlation by Lesson Number

Lesson (Activity) Number	Excel Math Lesson Objective	Common Core Standard
L41	Learning the equivalent for one year in days and in weeks; learning about leap year; calculating elapsed time crossing months within a week	Number System 2 Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L42	Determining the question given the information and the answer; estimating the most reasonable answer	Number System 3 Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L43	Calculating elapsed time in minutes across the 12 on a clock	Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L44	Converting fractions and decimal numbers to percents by setting up equivalent fractions	Ratios / Proportional Relationships 3c
L45	Using Venn Diagrams to understand the union and intersection of sets	Statistics / Probability 1, 2, 3, 4, 5a, 5b, 5c, 5d
L46	Converting mixed numbers to decimal numbers by setting up equivalent fractions	Number System 1
L47	Comparing fractions with unlike denominators in less than and greater than problems and in true and not true number statements by setting up equivalent fractions	Number System *7a, 7b
L48	Converting improper fractions as part of mixed numbers; recognizing division without the “÷” symbol	Number System 1 Mathematical Practices 4
L49	Rounding money amounts and decimal numbers to the nearest dollar or whole number	Number System 3
L50	Determining factors, prime numbers, composite numbers and prime factors	Mathematical Practices 4
L51	Multiplying decimal numbers	Number System 3
L52	Dividing decimal numbers by whole numbers; converting percents to decimal numbers	Ratios / Proportional Relationships 3c Number System 3
L53	Comparing decimal numbers in less than and greater than problems	Number System 3
L54	Recognizing Roman numerals: I, V, X, L, C, D and M	Expressions / Equations 2a, 2b, 2c, 3, 4, 6
L55	Calculating averages	Statistics / Probability 5c Mathematical Practices 4
L56	Determining the greatest common factor and least common factor	Number System 4 Mathematical Practices 4
L57	Simplifying fractions; solving equations involving fractions	Number System 1
L58	Estimating answers to problems involving numbers with up to nine digits	Expressions / Equations 2a, 2b, 2c, 3, 5, *6, *7 Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L59	Calculating the volume of a rectangular prism with one or more layers of cubes using the formula $L \times W \times H$	Geometry 2, 4
L60	Recognizing parts of a circle; calculating diameter and radius; associating the 360 degrees in a circle with one-quarter, one-half, three-quarter and full turns	
L61	Recognizing the thousandths place; rounding decimal numbers to the nearest tenth or hundredth; solving equations involving decimals	Number System 3 Expressions / Equations 2a, 2b, *2c, 3, 4, 5, 6
L62	Dividing a two-digit divisor into a three-digit dividend with a two-digit quotient; simplifying fraction answers	Number System 2
L63	Comparing positive and negative numbers	Number System 5, *6a, 6c, 7a, 7b, *7c, *7d Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L64	Determining numbers that are multiples of one number and factors of another	Mathematical Practices 4

*Gives opportunity to teach specific State Standard



Common Core 6th Grade Standards / Excel Math Correlation by Lesson Number

Lesson (Activity) Number	Excel Math Lesson Objective	Common Core Standard
L65	Calculating mean, median and mode; using stem and leaf plots	Statistics / Probability 1, 2, 3, 4, 5a, 5b, 5c, 5d Mathematical Practices 4
L66	Calculating equivalent ratios	Ratios / Proportional Relationships 1, 2
L67	Determining percent in word problems	Ratios / Proportional Relationships 3c Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L68	Determining if coordinate points are on a given line	Number System *6b, 6c, *8
L69	Using trial and error and charting strategies to solve word problems	Number System 3 Expressions / Equations *7, *9 Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L70	Recognizing the difference between probability and statistics; defining dependent and independent variable, central tendency, statistics and outlier; recognizing factors that influence data collection; creating a scatter plot	Statistics / Probability 1, 2, 3, 4, 5a, 5b, 5c, 5d Mathematical Practices 1, 2, 3, 5, 6, 7, 8
L71	Computing the percent of a whole number, money amount or decimal number	Ratios / Proportional Relationships 3c Number System 3
L72	Calculating cost per unit	Ratios / Proportional Relationships 2, 3b Number System 3 Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L73	Filling in missing numbers in a sequence of decimal numbers	
L74	Putting decimal numbers in order from least to greatest and greatest to least; evaluating decimal numbers in true and not true number statements	
L75	Calculating the perimeter and area of an irregular figure	Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L76	Calculating area and perimeter given coordinates on a coordinate grid	Number System 6b, 6c, *8 Geometry 3
L77	Calculating using exponents; calculating square roots	Expressions / Equations 1
L78	Selecting an equivalent fraction; simplifying improper fractions as part of a mixed number answer	
L79	Solving word problems involving decimals	Number System 3 Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L80	Recognizing complementary, straight and supplementary angles	
L81	Calculating decimal answers in division problems when zeroes need to be added to the right of the dividend	Number System 2, 3
L82	Dividing using short division	Number System 2
L83	Converting mixed numbers to improper fractions	
L84	Filling in missing numbers in sequences counting by varying amounts	Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L85	Multiplying fractions and whole numbers by fractions	
L86	Estimating to the nearest dollar or whole number	Number System 3 Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L87	Comparing fractions in word problems	Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L88	Recognizing adjacent, vertical, corresponding, exterior and interior angles; defining angle bisector	

*Gives opportunity to teach specific State Standard



Common Core 6th Grade Standards / Excel Math Correlation by Lesson Number

Lesson (Activity) Number	Excel Math Lesson Objective	Common Core Standard
L89	Calculating distance, time, rate and speed in word problems	Ratios / Proportional Relationships 3b, 3d Number System 2 Expressions / Equations 2c, 3, 4, 5, *6, 7 Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L90	Selecting the fraction, percent or decimal number that best represents a shaded region	Ratios / Proportional Relationships 3c Mathematical Practices 4
L91	Solving equations with embedded parentheses	Expressions / Equations 2a, 2b, 2c, 3, 4
L92	Calculating elapsed time more than one week crossing months	Number System 2 Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L93	Reducing improper fraction answers to their lowest terms	
L94	Solving problems using data displayed as percent pie graphs	Ratios / Proportional Relationships 3c Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L95	Recognizing decimal places to the right of the thousandths; multiplying decimals when zeroes need to be added to the product	Number System 3
L96	Solving word problems by working backwards	Ratios / Proportional Relationships 3b, 3c Number System 2 Expressions / Equations 2a, 2b, 2c, 3, 5, 6, 7, 9 Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L97	Writing probability as a fraction, decimal, percent or proportion (ratio)	Ratios / Proportional Relationships 1, 2, *3d Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L98	Selecting the most reasonable answer involving percents	Ratios / Proportional Relationships 3c Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L99	Writing probabilities as lowest-terms fractions	Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L100	Calculating the surface area of a rectangular prism; determining the equation that creates a pattern	Expressions / Equations 2a, 2b, 2c, 3, 4, 5, 6, 7, 9 Geometry 4 Statistics / Probability 1, 2, 3, *4, 5a, 5b, 5c, 5d
L101	Determining reciprocals	
L102	Multiplying and dividing decimal numbers by powers of ten	Number System 3
L103	Dividing a three-digit divisor into a three-digit dividend with a one-digit quotient	Number System 2
L104	Multiplying mixed numbers	
L105	Solving word problems involving percent, including the word “not”	Ratios / Proportional Relationships 3c Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L106	Subtracting fractions with like denominators with regrouping	
L107	Simplifying division problems using powers of ten	Number System 2
L108	Estimating using rounding to one-digit accuracy; calculating volume in word problems	Number System 3 Geometry 2 Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L109	Determining negative numbers using coordinate points	Number System 5, 6a, 6b, 6c, *7a, *7b, *7c, *7d, *8
L110	Solving word problems involving sales tax, sale price, interest and profit	Ratios / Proportional Relationships 3c Number System 3 Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L111	Converting decimal numbers to percents and percents to decimal numbers	Ratios / Proportional Relationships 3c

*Gives opportunity to teach specific State Standard



Common Core 6th Grade Standards / Excel Math Correlation by Lesson Number

Lesson (Activity) Number	Excel Math Lesson Objective	Common Core Standard
L112	Using multiplication and division to simplify fraction multiplication problems; simplifying fractions before multiplying	Number System 1
L113	Converting decimal numbers to lowest-terms fractions or mixed numbers	Number System 3
L114	Determining the equation that represents a problem and the equation that solves it	Expressions / Equations 2a, 2b, 3, 4, 5, 6, 7 Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L115	Identifying the equation that represents a line on a coordinate graph; learning slope and intercept	Number System 6b, 6c, *8 Expressions / Equations 2a, 2b, 2c, 3, 4, 5, 6, 7 Statistics / Probability 4 Mathematical Practices 4
L116	Determining percent of a whole number	Ratios / Proportional Relationships 3c Expressions / Equations 9 Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L117	Solving word problems involving the multiplication of fractions and mixed numbers	Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L118	Dividing fractions	Number System 1
L119	Arranging fractions, decimal numbers and mixed numbers on a number line	Number System *5, 6a, 6c, *7c, *7d
L120	Calculating averages involving decimals and fractions	Number System 2, 3 Statistics / Probability 5c Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L121	Calculating the area of a parallelogram	
L122	Multiplying a three-digit number by a three-digit number	
L123	Rounding mixed numbers	Number System *7a, *7b
L124	Calculating the area of a triangle	Geometry 1
L125	Calculating the circumference and area of a circle; recognizing π (pi)	
L126	Converting measurements using multiplication or division with fractional or decimal remainders	Ratios / Proportional Relationships *3d
L127	Calculating percents in word problems	Ratios / Proportional Relationships 3c Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L128	Converting fractions to decimal numbers using division; recognizing the symbol for a repeating decimal	Number System 3
L129	Converting fractions to percents	Ratios / Proportional Relationships 3c Number System 3
L130	Adding positive and negative integers	Number System 5, 6a, 6c, *7a, *7b, *7c, *7d Mathematical Practices 4
L131	Continued - Adding positive and negative integers	Number System 5, 6a Mathematical Practices 4
L132	Dividing a two-digit divisor into a three-digit dividend with a one-digit quotient	Number System 2 Mathematical Practices 4
L133	Calculating expected numbers based on probabilities	Ratios / Proportional Relationships 3c Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L134	Using rounding to estimate quotients	Number System 2
L135	Determining percents that are greater than 100% and less than 1%	Ratios / Proportional Relationships 3c

*Gives opportunity to teach specific State Standard



Common Core 6th Grade Standards / Excel Math Correlation by Lesson Number

Lesson (Activity) Number	Excel Math Lesson Objective	Common Core Standard
L136	Dividing a three-digit divisor into a four-digit dividend with a two-digit quotient	Number System 2
L137	Adding and multiplying measurements, then simplifying units	Ratios / Proportional Relationships *3d Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L138	Dividing a decimal number by a decimal number	Number System 3
L139	Calculating the volume of a triangular prism or cylinder	Geometry 2
L140	Reviewing rounding quotients; calculating percents in word problems, rounding to the nearest whole percent	Ratios / Proportional Relationships 3c Number System 2, 3
L141	Subtracting measurements by exchanging units	Ratios / Proportional Relationships *3d Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L142	Dividing mixed numbers	Number System 1
L143	Subtracting positive and negative integers	Number System 5, 6a Mathematical Practices 4
L144	Continued - Subtracting positive and negative integers	Number System 5, 6a Mathematical Practices 4
L145	Determining the fourth vertex of a parallelogram on a coordinate graph	Geometry 3
L146	Subtracting mixed numbers and fractions with unlike denominators with regrouping	
L147	Dividing a three-digit divisor into a four-digit dividend with a one-digit quotient	Number System 2
L148	Solving for an unknown with similar polygons	Geometry 1, *3
L149	Determining number patterns	Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L150	Calculating the probability of two separate events as a sum and two consecutive events as a product; calculating using factorials and permutations	Number System 3 Statistics / Probability 1, 2, 3, 4, 5a, 5b, 5c, 5d Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L151	Comparing the value of products using different currencies	Number System 3 Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L152	Calculating and comparing cost per unit	Ratios / Proportional Relationships *2, 3b
L153	Solving word problems involving division of mixed numbers	Number System 1 Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L154	Estimating answers to division word problems	Number System 2 Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
L155	Multiplying and dividing positive and negative integers	Number System 5, 6a Mathematical Practices 4
Activity 1	Round & Oval Figures	Geometry *3 Mathematical Practices 4
Activity 2	Triangular Figures	Geometry 1 Mathematical Practices 4
Activity 3	Area & Perimeter	Geometry 1 Mathematical Practices 4
Activity 4	Surface Area	Geometry 4 Mathematical Practices 4
Activity 5	Three-Dimensional Figures	Geometry 4
Activity 6	Similarity & Congruence	Ratios / Proportional Relationships 1, 2
Activity 7	Mobius Strips	
Activity 8	Tessellations	Geometry 1
Activity 9	Data Collection	Statistics / Probability 1, 2, 3, 4, 5a, 5b, 5c, 5d Mathematical Practices 1, 2, 3, 5, 6, 7, 8

*Gives opportunity to teach specific State Standard



**Common Core 6th Grade Standards /
Excel Math Correlation by Lesson Number**

Lesson (Activity) Number	Excel Math Lesson Objective	Common Core Standard
Activity 10	Interquartile Range	Statistics / Probability 5c, 5d Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
Activity 11	Formulating Questions	Mathematical Practices 1, 2, 3, 5, 6, 7, 8
Activity 12	Fractions	Ratios / Proportional Relationships 1 Mathematical Practices 4
Activity 13	Density	Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8
Activity 14	Range	Ratios / Proportional Relationships 3c, 3d Mathematical Practices 1, 2, 3, 4, 5, 6, 7, 8