

| Standards / Objectives | Excel Math Lesson Numbers | Stretch Lesson Numbers Activity Numbers |
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Strand A
Number Sense, Concepts, and Operations

Standard 1
The student understands the different ways numbers are represented and used in the real world.

Benchmark MA.A.1.2.1: The student names whole numbers combining 3-digit numeration (hundreds, tens, ones) and the use of number periods, such as ones, thousands, and millions and associates verbal names, written word names, and standard numerals with whole numbers, commonly used fractions, decimals, and percents.

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| 1. Reads, writes, and identifies whole numbers through hundred thousands or more. | 1, 2, 3, 4, 6, 7, 9, 12, 13, 14, 17, 19, 21, 23, 24, 27, 31, 34, 38, 43, 47, 49, 79, 100, 104, 150 | |
| 2. Reads, writes, and identifies proper fractions with denominators including 2, 3, 4, 5, 6, 8, 10, and 100. | 54, 66, 82, 109, 136, 140, 147, 148, 149 | Activity 8 |
| 3. Reads, writes, and identifies decimal notation in the context of money. | 33, 51, 114, 115, 134 | 55, 92, 105, 122, 130, 137, 139, 152 |

Benchmark MA.A.1.2.2: The student understands the relative size of whole numbers, commonly used fractions, decimals, and percents.

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| 1. Uses language and symbols (>, <, =) to compare the relative size of numbers in the same form. | 1, 4, 12, 13, 14, 17, 19, 21, 23, 24, 28, 36, 38, 45, 50, 53, 57, 58, 59, 67, 68, 71, 73, 81, 87, 96, 99, 100, 104, 107, 109, 113, 114, 119, 122, 131, 137, 140, 145 | 1, 5, 9, 10, 11, 19, 22, 24, 30, 31, 33, 39, 40, 44, 45, 48, 49, 52, 56, 57, 62, 63, 65, 68, 69, 70, 71, 73, 75, 77, 83, 89, 91, 94, 95, 100, 101, 102, 103, 107, 110, 124, 128, 129, 134, 137, 138 Activity 5, 8 |
| 2. Compares and orders whole numbers through hundred thousands or more, using concrete materials, number lines, drawings, and numerals. | 3, 4, 12, 13, 17, 21, 31, 38, 53, 57, 98, 100, 104 | 9, 35, 65 Order items / events: 8, 14, 32, 53, 88 |
| 3. Compares and orders commonly used fractions, including halves, thirds, fourths, fifths, sixths and eighths, using concrete materials. | 82, 140, 147, 148, 149 | Activity 8 |



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| Benchmark MA.A.1.2.3: The student understands concrete and symbolic representations of whole numbers, fractions, decimals, and percents in real-world situations. | | |
| 1. Translates problem situations into diagrams and models using whole numbers, fractions, and decimal notation in the context of money. | 16, 22, 33, 44, 51, 75, 80, 82, 83, 95, 114, 115, 122, 126, 127, 134, 146, 149 | 10, 55, 71, 92, 105, 112, 122, 130, 137, 139 |
| Benchmark MA.A.1.2.4: The student understands that numbers can be represented in a variety of equivalent forms using whole numbers, decimals, fractions, and percents. | | |
| 1. Uses concrete materials to model equivalent forms of whole numbers and common fractions. | 53, 66, 109, 140, 147, 149 Add/Sub fractions: 109, 140 | Activity 8 |
| 2. Identifies equivalent forms of numbers. | 23, 27, 28, 34, 36, 57, 64, 99, 140, 147, 149 | Activity 8 |
| 3. Knows that two numbers in different forms are equivalent or non-equivalent, using whole numbers, fractions, and decimals in the context of money. | 22, 33, 44, 51, 82, 114, 115, 149 | 55 |
| Standard 2 The student understands number systems. | | |
| Benchmark MA.A.2.2.1: The student uses place-value concepts of grouping based upon powers of ten (thousandths, hundredths, tenths, ones, tens, hundreds, thousands) within the decimal number system. | | |
| 1. Knows the value of a given digit in whole numbers to hundred thousands, including writing and interpreting expanded forms of numbers. | 1, 3, 7, 12, 14, 19, 23, 27, 34, 38, 41, 42, 43, 47, 49, 52, 64, 67, 73, 90, 100, 115, 131, 132, 133, 150 | Activity 8 |
| 2. Knows that the value of each place is 10 times that of the place to its right (for example, 1,000 = 10 x 100). | 1, 7, 12, 14, 19, 23, 27, 34, 43, 47, 64, 73, 90, 100, 131, 132, 133 | Activity 8 |
| Benchmark MA.A.2.2.2: The student recognizes and compares the decimal number system to the structure of other number systems such as the Roman numeral system or bases other than ten. | | |
| 1. Compares the decimal (base 10) number system to the Roman numeral system using the Roman numerals I, V, X, L, and C. | | 85, 125 |

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| <p>Standard 3</p> <p>The student understands the effects of operations on numbers and the relationship among these operations, selects appropriate operations, and computes for problem solving.</p> | | |
| <p>Benchmark MA.A.3.2.1: The student understands and explains the effects of addition, subtraction, and multiplication on whole numbers, decimals, and fractions, including mixed numbers, and the effects of division on whole numbers, including the inverse relationship of multiplication and division.</p> | | |
| <p>1. Explains and demonstrates the addition and subtraction of whole numbers (up to three digits or more) using concrete materials, drawings, symbols, and algorithms.</p> | <p>1, 2, 3, 6, 7, 8, 9, 11, 12, 13, 14, 16, 17, 19, 23, 24, 26, 27, 29, 31, 33, 34, 38, 39, 41, 42, 44, 45, 47, 51, 52, 58, 64, 67, 69, 74, 75, 79, 81, 84, 92, 96, 98, 115, 122, 123, 136, 146</p> | <p>1, 2, 5, 6, 7, 9, 11, 12, 13, 16, 18, 19, 21, 22, 23, 24, 25, 26, 28, 31, 33, 35, 36, 38, 39, 40, 43, 44, 45, 48, 49, 52, 54, 55, 56, 57, 62, 63, 65, 68, 70, 73, 77, 79, 81, 83, 89, 91, 92, 94, 95, 101, 102, 103, 105, 107, 109, 110, 112, 114, 117, 119, 122, 123, 124, 128, 129, 130, 134, 137, 138, 139, 141, 143, 144, 146, 149, 151, 154</p> |
| <p>2. Explains the inverse relationship of addition and subtraction and demonstrates that relationship by writing related fact families.</p> | <p>6, 13, 17, 24, 45, 103</p> | <p>11, 19, 24, 31, 39, 40, 44, 49, 56, 63, 68</p> |
| <p>3. Explains and demonstrates the meaning of multiplication (for the repeated addition, array, and area models) using manipulatives, drawings, number sentences, and story problems.</p> | <p>39, 46, 53, 61, 68, 73, 91, 95, 96, 97, 117, 118, 126, 131, 142, 151, 153, 154</p> | <p>34, 70, 71, 73, 83, 89, 94, 100, 101, 107, 114, 119, 124, 129, 134, 149, 152, 154</p> |
| <p>4. Explains and demonstrates the meaning of division and of remainders (for the repeated subtraction and partitive models) using manipulatives, drawings, number sentences, and story problems.</p> | <p>58, 59, 71, 87, 88, 93, 94, 96, 101, 102, 103, 111, 114, 117, 118, 132, 133, 134, 142, 151, 153, 154</p> <p>Basic Fact Division: 72, 73, 74, 79, 81, 83, 84, 86, 89, 92, 94, 97, 98, 99, 104, 107, 108, 113, 119, 124, 126, 127, 131, 136, 139, 142, 143, 144, 148, 151, 152, 153, 154</p> | <p>70, 75, 110, 134, 141, 149</p> |
| <p>5. Solves multiplication basic facts using various strategies including the following:</p> | <p>Basic Fact Practice: 48, 49, 51, 52, 53, 56, 57, 64, 67, 68, 73, 74, 76, 79, 80, 81, 82, 84, 86, 92, 96, 97, 99, 107, 113, 119, 124, 131, 136, 139, 142, 143, 151</p> | |



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| <ul style="list-style-type: none"> modeling with concrete objects or drawings | 39, 42, 44, 46, 53, 68, 71, 73, 91, 97, 114, 117, 118, 126, 127, 142, 151, 153, 154 | 25, 71 |
| <ul style="list-style-type: none"> skip counting, for example, to find 4×5, count 5, 10, 15, 20 | 46, 73, 96, 97, 114, 126, 127 | 25 |
| <ul style="list-style-type: none"> using doubles and near doubles, such as $3 \times 8 = (2 \times 8) + 8$ | 39, 61, 126 | 71 |
| <ul style="list-style-type: none"> applying the commutative property of multiplication, such as $7 \times 3 = 3 \times 7$ | 71, 96, 117, 142, 151 | |
| <ul style="list-style-type: none"> applying the distributive property of multiplication, such as $8 \times 7 = (8 \times 5) + (8 \times 2)$ | 92, 107 | 33 |
| <ul style="list-style-type: none"> noting and applying patterns in the “facts tables,” such as the regularity in the “nines” | 96, 97, 118, 126, *151 | |
| <ul style="list-style-type: none"> using the zero and identity properties of multiplication | 39, 44 | |
| <p>6. Explains the inverse relationship of multiplication and division and writes related fact families.</p> | 71, 96, 117, 118, 132, 134, 142, 151 | |
| <p>7. Predicts the relative size of solutions in addition, subtraction, multiplication, and division of whole numbers (for example, dividing a whole number by a smaller whole number results in another number that is smaller than the original number).</p> | 31, 46, 58, 59, 93, 114, 122, 123, 134, 142 | 2, 6, 11, 19, 24, 25, 31, 39, 40, 44, 49, 52, 56, 63, 68, 75, 79, 81, 91, 109, 122 |

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| <p>Benchmark MA.A.3.2.2: The student selects the appropriate operation to solve specific problems involving addition, subtraction, and multiplication of whole numbers, decimals, and fractions, and division of whole numbers.</p> | | |
| <p>1. Writes number sentences for given situations involving the addition, subtraction, multiplication, and division of whole numbers.</p> | <p>5, 11, 13, 32, 34, 36, 40, 58, 59, 65, 68, 83, 87, 88, 98, 105, 110, 111, 114, 118, 119, 122, 123, 137, 151, 152</p> | <p>1, 2, 3, 5, 6, 7, 9, 10, 11, 12, 13, 16, 18, 19, 21, 22, 23, 24, 25, 26, 28, 29, 30, 31, 33, 34, 35, 36, 37, 38, 39, 40, 43, 44, 45, 48, 49, 52, 54, 56, 57, 62, 63, 65, 68, 69, 70, 71, 73, 75, 77, 79, 81, 83, 89, 91, 94, 95, 100, 101, 102, 103, 105, 109, 112, 114, 117, 119, 122, 123, 124, 128, 129, 130, 134, 137, 138, 139, 144, 149, 154</p> <p>Activity 5</p> |
| <p>2. Uses problem-solving strategies to determine the operation needed to solve one-step problems involving addition, subtraction, multiplication, and division of whole numbers.</p> | <p>5, 9, 11, 15, 20, 31, 32, 40, 65, 68, 70, 75, 83, 87, 88, 98, 105, 110, 111, 114, 115, 122, 123, 126, 127, 137, 151, 152</p> | <p>2, 3, 5, 6, 7, 9, 10, 12, 16, 18, 21, 22, 23, 25, 26, 28, 29, 30, 33, 34, 35, 37, 38, 45, 48, 52, 57, 62, 71, 79, 81, 88, 91, 92, 95, 100, 102, 105, 112, 117, 122, 130, 137, 139, 140, 143, 151</p> <p>Activity 5</p> |
| <p>Benchmark MA.A.3.2.3: The student adds, subtracts, and multiplies whole numbers, decimals, and fractions, including mixed numbers, and divides whole numbers to solve real-world problems, using appropriate methods of computing, such as mental mathematics, paper and pencil, and calculator.</p> | | |
| <p>1. Solves real-world problems involving addition, subtraction, multiplication, and division of whole numbers using an appropriate method (for example, mental math, paper and pencil, concrete materials, calculator).</p> | <p>11, 20, 40, 58, 59, 65, 68, 70, 75, 83, 87, 88, 93, 105, 111, 114, 115, 122, 123, 126, 127, 146, 151, 152</p> | <p>1, 2, 3, 5, 6, 7, 10, 12, 16, 18, 21, 22, 23, 25, 26, 28, 29, 34, 36, 37, 38, 45, 62, 71, 77, 81, 92, 102, 103, 105, 109, 117, 122, 130, 137, 138, 139, 140, 143, 151</p> <p>Activity 5</p> |
| <p>2. Explains the reason for choosing a particular computing method for a particular problem.</p> | <p>11, 15, 20, 31, 40, 65, 68, 70, 75, 83, 87, 88, 105, 111, 114, 115, 122, 123, 126, 127, 146, 151, 152</p> | <p>2, 3, 5, 6, 7, 10, 12, 16, 18, 21, 22, 23, 25, 26, 28, 36, 38, 45, 53, 59, 61, 62, 66, 81, 92, 102, 103, 105, 109, 117, 130, 138, 139, 140, 143</p> <p>Activity 5</p> |
| <p>3. Solves real-world multiplication problems with whole numbers (two digits by one digit) using concrete materials, drawings, and paper and pencil.</p> | <p>68, 83, 105, 126, 127, 152</p> | <p>25, 34, 71, 151</p> <p>Activity 5</p> |
| <p>4. Solves real-world division problems having divisors of one digit, dividends not exceeding two digits, with or without remainders.</p> | <p>58, 59, 87, 88, 93, 105, 111, 114</p> | <p>Activity 5</p> |

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Standard 4
The student uses estimation in problem solving and computation

Benchmark MA.A.4.2.1: The student uses and justifies different estimation strategies in a real-world problem situation and determines the reasonableness of results of calculations in a given problem situation.

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| 1. Uses estimation strategies to determine a reasonable estimate of a quantity. | 60, 75, 85, 90, 114, 115, 122, 134, 146 | 2, 6, 13, 16, 21, 25, 26, 28, 36, 48, 71, 79, 91, 92, 99, 102, 109, 117, 121, 127, 128, 130, 138, 146 Activity 3 |
| 2. Estimates quantities of objects to 250 or more (for example, using a benchmark or reference set of fewer objects). | | |
| 3. Chooses estimation strategies (for example, front-end, rounding) in real-world problem situations and explains the choice. | 60, 75, 85, 90, 114, 115, 122, 134 | 18, 92 |

Standard 5
The student understands and applies theories related to numbers

Benchmark MA.A.5.2.1: The student understands and applies basic number theory concepts, including primes, composites, factors, and multiples.

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| 1. Knows multiples of whole numbers (with products to 60 or more). | 18, 93, 94, 97, 111, 113, 117, 126, 127 | |
| 2. Uses a model to determine factors of whole numbers through 100 (for example, array). | 6, 13, 17, 23, 24, 45, 96, 126, 142, 143 Prime Factors: 144, 151 | 2, 6, 16, 18, 21, 28, 36 |
| 3. Uses tables and charts to determine multiples of whole numbers 1-10 (for example, hundred chart, calendar). | 2, 6, 37, 48, 53, 80, 97, 113, 126 | |

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Strand B: MEASUREMENT

Standard 1
The student measures quantities in the real world and uses the measures to solve problems

Benchmark MA.B.1.2.1: The student uses concrete and graphic models to develop procedures for solving problems related to measurement including length, weight, time, temperature, perimeter, area, volume, and angle.

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| 1. Knows measurement concepts and can use oral and written language to communicate them. | 32, 50, 56, 62, 63, 72, 74, 83, 86, 108, 114, 116, 121, 124, 125, 129, 135, 145 | 29, 102, 109, 117, 121, 127, 128, 145, 150 Activity 3, 7 |
| 2. Uses a wide variety of concrete objects to investigate measurement of length, weight, capacity, area, perimeter, and volume (for example, cubes, grid paper, string, squares). | 50, 56, 62, 63, 72, 74, 83, 86, 114, 116, 121, 141, 145 | 4, 102, 104, 109, 111, 115, 117, 121, 127, 128, 136, 145, 150, 155 Activity 7 |
| 3. Knows about measurement of time including using A.M. and P.M., clocks and calendars. | 18, 26, 65, 78, 84, 89, 112 | 3, 12, 22, 64, 142 |
| 4. Knows temperature scales and uses thermometers. | 32 | 133 Activity 10 |
| 5. Knows right angles (90°). | 41, 128, 138, 139 | |

Benchmark MA.B.1.2.2: The student solves real-world problems involving length, weight, perimeter, area, capacity, volume, time, temperature, and angles.

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| 1. Solves real-world problems involving measurement using concrete and pictorial models for the following: | | |
| • length (for example, half-inch, centimeter) | 50, 56, 62, 74, 83, 108 | |
| • weight (for example, pound, kilogram) | 32, 50, 62, 63, 83 | 102, 109, 117, 121, 127, 128, 140, 155 |
| • time (fifteen-, five-, and one-minute intervals) | 18, 65, 78 | |
| • capacity (for example, cup, liter) | 63 | 29, 109 |
| • temperature (Fahrenheit and Celsius) | 32 | Activity 10 |
| • angles (right) | 138 | |

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| 2. Solves real-world problems involving perimeter, area, and volume using concrete materials or graphic models. | 72, 83, 86, 116, 124, 135, 145 | 4, 17, 76, 104, 111, 115, 145, 147, 150 Activity 3, 7 |
| 3. Uses schedules, calendars, and elapsed time in hour intervals to solve real-world problems. | 26, 27, 84, 89, 112, 152 | 12, 22, 38, 54, 64, 142 Seconds: 3 |
| Standard 2 The student compares, contrasts, and converts within systems of measurement (both standard/nonstandard and metric/customary) | | |
| Benchmark MA.B.2.2.1: The student uses direct (measured) and indirect (not measured) measures to calculate and compare measurable characteristics. | | |
| 1. Calculates and compares measurable characteristics using manipulatives (for example, creates a meter using centimeter cubes). | 62, 63, 72, 74, 83, 114, 121, 124, 129, 141 | 4, 17, 29, 46, 58, 72, 76, 87, 104, 111, 115, 136, 147, 150 Activity 7 |
| 2. Devises nonstandard, indirect ways to compare lengths that cannot be physically compared (side-by-side) (for example, uses string to compare the lengths of crooked paths). | 10, 50, 72, 83 | 150 |
| 3. Uses customary and metric units to compare length, weight, and capacity. | 50, 56, 62, 63, 74, 83, 108, 114, 121, 124, 129 | 102, 109, 117, 121, 127, 140, 155 |
| Benchmark MA.B.2.2.2: The student selects and uses appropriate standard and nonstandard units of measurement, according to type and size. | | |
| 1. Knows an appropriate unit of measure to determine the dimension(s) of a given object (for example, <u>standard</u> - student chooses centimeters instead of meters to measure a pencil; <u>nonstandard</u> - student chooses a paper clip instead of his or her hand to measure a pencil). | 50, 62, 63, 72, 74, 83, 116, 125 | 109, 150 |
| 2. Knows an appropriate unit of measure (standard or nonstandard) to measure weight and capacity. | 50, 62, 63, 83, 114, 125 | 29, 102, 109, 117, 121, 127, 128, 155 |

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| Standard 3 | | |
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| The student estimates measurements in real-world problem situations | | |
| Benchmark MA.B.3.2.1: The student solves real-world problems involving estimates of measurements, including length, time, weight, temperature, money, perimeter, area, and volume. | | |
| 1. Knows how to determine whether an accurate or estimated measurement is needed for a solution. | 62, 63, 72, 75, 83, 86, 108, 114, 116 | 102, 128 Activity 3 |
| 2. Using real-world settings, objects, graph paper, or charts, solves problems involving estimated measurements including the following: | | |
| • length to nearest inch, centimeter | 32, 56, 86, 108, Distance: 75 | |
| • weight to nearest pound, kilogram | 32, 122 | 109 |
| • time to nearest half-hour interval | 18, *65, 78 | 64 |
| • temperature to nearest five-degree interval | 32 | Activity 10 |
| • money to nearest \$1 or \$10 (combination of coin and currency) | 16, 22, 75, 114 | 55, 71, 92, 139 |
| 3. Knows how to estimate the area and perimeter of square and rectangular shapes using graph paper, geoboard or other manipulatives. | 72, 86, 116, 124 | 145, 150 Activity 3 |
| 4. Knows how to estimate the volume of a rectangular prism using manipulatives. | 135, 145 | |
| Standard 4 | | |
| The student selects and uses appropriate units and instruments for measurement to achieve the degree of precision and accuracy required in real-world situations | | |
| Benchmark MA.B.4.2.1: The student determines which units of measurement, such as seconds, square inches, dollars per tankful, to use with answers to real-world problems. | | |
| 1. Selects an appropriate measurement unit for labeling the solution to real-world problems. | 10, 32, 50, *62, 63, 83, 125 | Activity 3 |
| Benchmark MA.B.4.2.2: The student selects and uses appropriate instruments and technology, including scales, rulers, thermometers, measuring cups, protractors, and gauges, to measure in real-world situations. | | |
| 1. Selects and uses the appropriate tool for situational measures (for example, measuring sticks, scales and balances, thermometers, measuring cups). | 62, 63, 64, 83 | 29, 102, 109, 117, 121, 127, 128, 155 |

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Strand C: GEOMETRY AND SPATIAL SENSE

Standard 1
The student describes, draws, identifies, and analyzes two- and three-dimensional shapes

Benchmark MA.C.1.2.1: The student given a verbal description, draws and/or models two- and three-dimensional shapes and uses appropriate geometric vocabulary to write a description of a figure or a picture composed of geometric figures.

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| 1. Uses appropriate geometric vocabulary to describe two- and three-dimensional figures (for example, parallel and perpendicular lines, quadrilateral, right angle). | 8, 41, 69, 106, 119, 128, 129, 135, 139, 141, 145 | 1, 4, 17, 41, 46, 50, 58, 60, 72, 76, 77, 78, 86, 87, 90, 104, 115, 126, 132, 136, 147, 150, 151 Activity 2, 3, 7, 12 |
| 2. Draws and classifies two-dimensional figures having up to six or more sides. | 41, 106, 119, 129 | 4, 17, 46, 50, 58, 72, 78, 87, 115, 132, 136, 147, 150, 151 Activity 2 |
| 3. Uses appropriate geometric vocabulary to describe properties of two-dimensional figures. | 8, 41, 54, 106, 119, 129, 139 | 41, 50, 60, 78, 86, 104, 126, 132, 151 Activity 2, 3 |

Standard 2
The student visualizes and illustrates ways in which shapes can be combined, subdivided, and changed

Benchmark MA.C.2.2.1: The student understands the concepts of spatial relationships, symmetry, reflections, congruency, and similarity.

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| 1. Uses manipulatives to solve problems requiring spatial visualization. | 55, 69, 129 | 4, 17, 29, 41, 46, 50, 58, 60, 72, 78, 87, 90, 104, 115, 126, 132, 136, 147, 151 Activity 2, 3, 7 |
| 2. Knows symmetry, congruency, and reflections in geometric figures using concrete materials (for example, pattern blocks, geoboards, mirrors). | 55, 120 | 46, 90 Activity 2 |
| 3. Knows congruent and similar figures. | 120 | |

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| Benchmark MA.C.2.2.2: The student predicts, illustrates, and verifies which figures could result from a flip, slide, or turn of a given figure. | | |
| 1. Explores flips, slides, and 180° turns (either clockwise or counterclockwise) using concrete and graphic materials (for example, pattern blocks, geoboards, dot paper). | 120 | 46 |
| 2. Knows the effect of a flip, slide, and 180° turn on a geometric figure. | 120 | 46 |
| 3. Explores tessellations. | | 41 Activity 2 |
| Standard 3 The student uses coordinate geometry to locate objects in both two and three dimensions and to describe objects algebraically | | |
| Benchmark MA.C.3.2.1: The student represents and applies a variety of strategies and geometric properties and formulas for two- and three-dimensional shapes to solve real-world and mathematical problems. | | |
| 1. Compares the concepts of area and perimeter through the use of concrete and graphic materials (for example, geoboards, color tiles, grid paper). | 72, 86, *116, 124 | 150 Activity 2, 3, 7 |
| 2. Applies the concepts of area and perimeter of rectangles to solve real-world and mathematical problems through the use of concrete materials (for example, framing a photograph). | *72, 86, *116, 124 | 150 |
| Benchmark MA.C.3.2.2: The student identifies and plots positive ordered pairs (whole numbers) in a rectangular coordinate system (graph). | | |
| 1. Knows how to identify, locate, and plot ordered pairs of whole numbers on a graph. | | Activity 4 |

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Strand D: ALGEBRAIC THINKING

Standard 1

The student describes, analyzes, and generalizes a wide variety of patterns, relations, and functions

Benchmark MA.D.1.2.1: The student describes a wide variety of patterns and relationships through models, such as manipulatives, tables, graphs, rules using algebraic symbols.

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| 1. Identifies missing parts in patterns. | 6, 48, 49, 77, 80, 113, 126, 130, 155 | 1, 2, 6, 16, 21, 28, 35, 36, 45, 48, 57, 77, 146 |
| 2. Describes, extends, and creates numerical and geometric patterns through models (for example, concrete objects, drawings, simple number sequences). | 2, 6, 13, 31, 37, 38, 48, 49, 53, 70, 77, 80, 97, 98, 104, 113, 126, 130, 155 | 2, 6, 9, 16, 21, 28, 35, 36, 45, 48, 57, 78, 82, 93, 116, 123, 135, 138, 146 |
| 3. Poses and solves problems by identifying a predictable visual or numerical pattern (for example: Continue this pattern: +, -, =, +, +, -, -, ____, ____, ...). | 2, 6, 31, 37, 48, 49, 70, 77, 80, 97, 98, 113, 126, 130, 155 | 1, 35, 77, 78, 82, 93, 116, 135 |

Benchmark MA.D.1.2.2: The student generalizes a pattern, relation, or function to explain how a change in one quantity results in a change in another.

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| 1. Knows mathematical relationships in patterns (for example, the second number is two more than the first). | 2, 6, 13, 31, 37, 38, 46, 48, 49, 80, 97, 98, 113, 126, 130, 155 | 9, 35, 45, 48, 57, 65, 78, 82, 93, 116, 123, 135, 138, 146 Order of things / events: 8, 14, 27, 32, 42, 47, 59, 61, 66, 99, 108, 118, 131, 153 |
| 2. Analyzes number patterns and states the rule for relationships (for example, 2, 4, 6, 8, ...; the rule: +2). | 2, 6, 13, 31, 37, 38, 46, 48, 49, 70, 80, 97, 98, 113, 126, 155 | 1, 2, 6, 16, 21, 28, 36, 48, 57, 77, 82, 93, 116, 135 |
| 3. Discusses and explains the choice of the rule that applies to the pattern. | 6, 13, 31, 37, 46, 48, 49, 80, 97, 98, 113, 126, 130, 155 | 1, 2, 6, 16, 21, 28, 35, 36, 48, 57, 77, 78, 146 Order: 8, 14, 27, 32, 42, 47, 53, 59, 61, 66, 99, 108, 118, 131 |
| 4. Identifies and extends a pattern according to the given rule. | 2, 6, 13, 31, 37, 38, 48, 49, 70, 80, 98, 113, 126, 130, 155 | 1, 2, 6, 16, 21, 28, 35, 36, 45, 48, 57, 77, 78, 82, 93, 135, 138, 146 Order: 8, 14, 27, 32, 42, 47, 53, 59, 61, 66, 99, 108, 118, 131 |

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| 5. Applies and explains the appropriate rule to complete a table or chart (for example, in the following table, the rule is “multiply by 6”): $\begin{array}{cccc} 1 & 2 & 3 & 4 \\ 6 & 12 & ? & 24 \end{array}$ | 2, 6, 31, 53, 70, 80, 113, 126 | 1, 2, 6, 21, 28, 36, 45, 77, 78, 82, 135 Order: 8, 14, 27, 32, 42, 47, 53, 59, 61, 66, 99, 108, 118, 123, 131 |
| Standard 2 The student uses expressions, equations, inequalities, graphs, and formulas to represent and interpret situation | | |
| Benchmark MA.D.2.2.1: The student represents a given simple problem situation using diagrams, models, and symbolic expressions translated from verbal phrases, or verbal phrases translated from symbolic expressions, etc. | | |
| 1. Uses concrete materials to model and solve a number sentence with a missing addend for simple word problems (for example, $13 + r = 15$). | 36, 76, 81, 83, 107, 110, 122, 123, 151 Parenthesis: 57, 92 | 1, 2, 5, 6, 9, 11, 16, 19, 21, 24, 28, 30, 31, 33, 36, 39, 40, 44, 49, 52, 56, 62, 63, 65, 68, 69, 70, 71, 75, 77, 79, 83, 89, 91, 95, 112, 114, 119, 124, 129, 134 |
| 2. Creates a simple word problem for a given number sentence, diagram, or model. | 36, 83, 110, *122, 123 | 70, 95, 101, 107, 129, 134 Activity 9 |
| 3. Knows that an equation is a number sentence stating that two quantities are equal (for example, identifies and provides examples and non-examples of equations). | 11, 28, 36, 39, 57, 76, 81, 92, 99, 105, 107, 110, 122, 123, 151 | 11, 19, 24, 30, 31, 33, 39, 40, 44, 49, 52, 56, 69, 70, 83, 89, 91, 92, 95, 100, 103, 114, 119, 123, 124, 129, 134, 138 |
| Benchmark MA.D.2.2.2: The student uses informal methods, such as physical models and graphs to solve real-world problems involving equations and inequalities. | | |
| 1. Uses physical models and graphs (for example, cubes, number lines) to solve real-world equations and inequalities. | 20, 36, 50, 126, 127, 134 | 23, 97 Activity 10 |
| 2. Uses information from physical models and graphs to solve problems. | 5, 15, 20, 36, 70, 80, 126, 127, 134 | 23, 97 Activity 10 |

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| Strand E: DATA ANALYSIS AND PROBABILITY | | |
|---|--------------------------------------|------------------------------------|
| Standard 1 The student understands and uses the tools of data analysis for managing information | | |
| Benchmark MA.E.1.2.1: The student solves problems by generating, collecting, organizing, displaying, and analyzing data using histograms, bar graphs, circle graphs, line graphs, pictographs, and charts. | | |
| 1. Identifies different parts of a graph (for example, titles, labels, key). | 20, 35 Charts: 80, 126, 127 | Charts: 23, 97, 143 Activity 10 |
| 2. Interprets and compares information from picto- and bar graphs including graphs from content-area materials and periodicals. | 20, 35 | Charts: 23, 97, 143 Activity 10 |
| 3. Generates questions, collects responses, and displays data in a table, pictograph or bar graph. | 30 All Create-a-Problem Act. (27) | Activity 10 |
| 4. Interprets and explains orally and in writing displays of data. | 30, 35, 70 | 23, 97 Activity 10 |
| Benchmark MA.E.1.2.2: The student determines range, mean, median, and mode from sets of data. | | |
| 1. Uses concrete materials to determine the mean in a set. | *60, *85, *134 | |
| 2. Identifies the median and mode from a set of numerical data. | *60, *85, *134 | |
| 3. Identifies the range in a set of numerical data. | 60, 85, 134 | 70 |
| 4. Uses concrete materials, pictures, or graphs to display data and identify range, median, and mode. | 60, 85, 134 | |
| Benchmark MA.E.1.2.3: The student analyzes real-world data to recognize patterns and relationships of the measures of central tendency using tables, charts, histograms, bar graphs, line graphs, pictographs, and circle graphs generated by appropriate technology, including calculators and computers. | | |
| 1. Uses a calculator to compare data. | 97 | 82, 93 |



Florida 3rd Grade Standards / Excel Math Correlation

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| 2. In class projects, constructs and discusses patterns in computer-generated graphs using real-world problems (for example, identify most popular pizza topping). | *20, *30, *35 | *143 * Activity 9 |
| Standard 2 The student identifies patterns and makes predictions from an orderly display of data using concepts of probability and statistics | | |
| Benchmark MA.E.2.2.1: The student uses models, such as tree diagrams, to display possible outcomes and to predict events. | | |
| 1. Determines the number of possible combinations of given items and displays them in an organized way (for example, lists all possible combinations of three shirts and two pairs of shorts). | 5, 20, 30 | 5, 48, 57, 62, 79, 82, 88, 93, 96, 99, 106, 116 Activity 1 |
| 2. Represents all possible outcomes for a particular probability situation or event using models such as charts or lists. | 5, 20, 30 | 5, 48, 57, 62, 79, 82, 88, 93, 96, 99, 106, 116 |
| 3. Calculates the probability of a particular event occurring from a set of all possible outcomes. | 5, 20, 30 Deductive Reasoning: 15, 25, 65, 70, 123 | 5, 48, 57, 62, 82, 96 Deductive Reasoning: 20, 27, 32, 37, 42, 47, 51, 53, 59, 61, 64, 66, 67, 74, 79, 80, 84, 88, 96, 98, 99, 103, 105, 106, 108, 113, 118, 120, 131, 133, 143, 148, 153 |
| Benchmark MA.E.2.2.2: The student predicts the likelihood of simple events occurring. | | |
| 1. Identifies and records the possible outcomes of simple experiments using concrete materials (for example, spinners, marbles in a bag, coin toss). | 5, *30 | 79, 82, 93, 96, 106, 116 Activity 1 |
| 2. Determines which outcomes are most likely to occur in certain situations (for example, spinning red is most likely to occur when a spinner is divided equally among red, blue, green, and red). | 5, *30 | |

| Standards / Objectives | Excel Math Lesson Numbers | Stretch Lesson Numbers Activity Numbers |
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| <p align="center">Standard 3 The student uses statistical methods to make inferences and valid arguments about real-world situations</p> | | |
|---|------------------------|--|
| <p>Benchmark MA.E.3.2.1: The student designs experiments to answer class or personal questions, collects information, and interprets the results using statistics (range, mean, median, and mode) and pictographs, charts, bar graphs, circle graphs, and line graphs.</p> | | |
| 1. Designs appropriate questions for a survey. | *5, *10, *20, *30 | Activity 9, 10 |
| 2. Creates a pictograph or bar graph to present data from a given survey. | *5, *10, *20, *30, 141 | 79 Activity 10 |
| 3. Explains the results from the data of a given survey. | *5, *10, 20, *30, 141 | 79 Activity 10 |
| <p>Benchmark MA.E.3.2.2: The student uses statistical data about life situations to make predictions and justifies reasoning.</p> | | |
| 1. Uses statistical data to recognize trends. | | 20, 67, 51, 79, 113, 120, 133, 148 Activity 9, 10 |
| 2. Applies statistical data to make generalizations. | | 20, 67, 51, 79, 113, 120, 133, 148 Activity 9, 10 |
| 3. Explains generalizations. | | 20, 67, 51, 79, 113, 120, 133, 148 Activity 9, 10 |