

Texas Essential Knowledge and Skills	Excel Math Lesson Numbers	Stretch Lesson Numbers Activity Numbers
NUMBER, OPERATION, QUANTITATIVE REASONING		
(6.1) Number, operation, and quantitative reasoning. The student represents and uses rational numbers in a variety of equivalent forms.		
(A) Compare and order non-negative rational numbers;	1, 2, 19, 22, 27, 47, 53, 73, 74, 90, 95, 101, 119, 123 Negative Numbers: 63, 119	1, 3, 20, 23, 29, 32, 36, 37, 67, 72, 81, 88, 144, 153 Activity 12
(B) Generate equivalent forms of rational numbers including whole numbers, fractions, and decimals;	3, 18, 24, 27, 35, 44, 46, 48, 54, 57, 66, 67, 71, 74, 78, 81, 83, 87, 90, 94, 99, 101, 105, 110, 111, 113, 116, 126, 127, 128, 129, 133, 135	62, 70, 86, 98, 113, 117, 133, 142, 155 Activity 12
(C) Use integers to represent real-life situations;	1, 4, 6, 8, 9, 13, 19, 20, 29, 31, 41, 42, 43, 55, 58, 63, 67, 69, 72, 79, 86, 87, 92, 96, 105, 110, 117, 127, 133, 137, 141, 151, 152, 153, 154	4, 6, 7, 10, 12, 13, 15, 18, 21, 24, 25, 26, 28, 30, 37, 38, 39, 42, 47, 48, 52, 54, 56, 68, 79, 82, 85, 90, 91, 94, 101, 104, 125, 137, 140, 150, 152
(D) Write prime factorizations using exponents;	50, *77	72, 88, *141
(E) Identify factors of a positive integer, common factors, and the greatest common factor of a set of positive integers; and	*6, 50, 56, 57, 64, 77, 116	90, 99
(F) Identify multiples of a positive integer and common multiples and the least common multiple of a set of positive integers.	1, 9, 17, 62, 64, 72, 92, 132	67, 92, 139 Activity 12
(6.2) Number, operation, and quantitative reasoning. The student adds, subtracts, multiplies, and divides to solve problems and justify solutions.		
(A) Model addition and subtraction situations involving fractions with objects, pictures, words, and numbers;	5, 28, 39, 62, 78, 93, 106, 146 Multiply / Divide: 155 Positive / Negative Numbers: 130, 131, 143, 144	49, 96, 104, 110
(B) Use addition and subtraction to solve problems involving fractions and decimals;	1, 35, 61, 79 Divide: 31, 52, 81, 102, 118, 128, 129, 138, 140, 142, 152, 153 Multiply: 51, 85, 102, 104, 112, 117, 133, 135, 140	18, 26, 35, 38, 46, 85, 93, 150 Multiply / Divide: 44, 47, 76, 84, 152



Texas 6th Grade TEKS / *Excel Math* Correlation

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(C) Use multiplication and division of whole numbers to solve problems including situations involving equivalent ratios and rates;	1, 3, 6, 9, 12, 16, 19, 26, 37, 38, 40, 41, 48, 61, 62, 72, 79, 82, 89, 91, 96, 99, 100, 103, 107, 114, 122, 126, 132, 134, 136, 147, 151, 154	2, 5, 7, 8, 10, 12, 22, 25, 27, 28, 31, 39, 42, 44, 47, 48, 50, 54, 55, 56, 59, 63, 68, 69, 70, 72, 73, 74, 76, 77, 78, 81, 83, 84, 87, 89, 94, 98, 101, 102, 111, 115, 123, 124, 130, 132, 138, 142, 143, 152, 155 Activity 3
(D) Estimate and round to approximate reasonable results and to solve problems where exact answers are not required; and	20, 42, 49, 58, 61, 86, 108, 123, 134, 140, 154	35
(E) Use order of operations to simplify whole number expressions (without exponents) in problem solving situations.	3, 37, 55, 72, 91, 96, 124	5, 22, 27, 28, 37, 39, 40, 44, 46, 47, 54, 56, 59, 63, 68, 69, 81, 132, 138

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PATTERNS, RELATIONSHIPS, ALGEBRAIC THINKING		
(6.3) Patterns, relationships, and algebraic thinking. The student solves problems involving direct proportional relationships.		
(A) Use ratios to describe proportional situations;	40, 66, 97	50, *54, *109, *119, *131, *135, 147
(B) Represent ratios and percents with concrete models, fractions, and decimals; and	40, 44, 52, 67, 71, 90, 94, 97, 98, 99, 105, 110, 111, 116, 127, 129, 133, 135, 140	48, 50, 143, 147, 152
(C) Use ratios to make predictions in proportional situations.	40, 66, 97	50, *54, *109, *119, *131, *135, 147
(6.4) Patterns, relationships, and algebraic thinking. The student uses letters as variables in mathematical expressions to describe how one quantity changes when a related quantity changes.		
(A) Use tables and symbols to represent and describe proportional and other relationships such as those involving conversions, arithmetic sequences (with a constant rate of change), perimeter and area; and	2, 4, 8, 13, 15, *23, 29, *30, 40, 69, 94, 98, 151 Pattern of shapes: 21, 33	6, 16, 21, 33, 43, 44, 51, 52, 54, 57, 58, 60, 64, 65, 77, *89, 91, 109, 121, 129, 131, 141, 149 Activity 4, 5, 6, 14
(B) Use tables of data to generate formulas representing relationships involving perimeter, area, volume of a rectangular prism, etc.	*30, *45, *59, *75, *76, 100, *108, *121, *124, *139, *148	*28, *39, *55, *56, *59, *63, *77 Activity 2, 3, 4, 14
(6.5) Patterns, relationships, and algebraic thinking. The student uses letters to represent an unknown in an equation.		
The student is expected to formulate equations from problem situations described by linear relationships.	1, 3, 8, 9, 13, 29, 30, 31, 33, 40, 43, 48, 55, 59, 69, 72, 75, 76, 84, 89, 94, 100, 114, 115, 124, 137, 148, 151	6, 8, 9, 10, 12, 15, 18, 20, 21, 22, 23, 25, 26, 27, 28, 30, 35, 37, 38, 39, 41, 44, 46, 47, 48, 50, 54, 55, 56, 59, 60, 63, 65, 67, 68, 69, 74, 75, 76, 77, 81, 82, 83, 84, 85, 89, 91, 93, 101, 124, 126, 128, 138, 140, 141, 150, 154

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GEOMETRY AND SPATIAL REASONING

(6.6) Geometry and spatial reasoning. The student uses geometric vocabulary to describe angles, polygons, and circles.

(A) Use angle measurements to classify angles as acute, obtuse, or right;	25, *33, 80, *88, *124, 148	Activity 2
(B) Identify relationships involving angles in triangles and quadrilaterals; and	25, 33, 80, *124, 148	Activity *1, 2, *8
(C) Describe the relationship between radius, diameter, and circumference of a circle.	60, 125	Activity *1, 3

(6.7) Geometry and spatial reasoning. The student uses coordinate geometry to identify location in two dimensions.

The student is expected to locate and name points on a coordinate plane using ordered pairs of non-negative rational numbers.	32, 36, 68, 76, 109, 115, 145	
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MEASUREMENT

(6.8) Measurement. The student solves application problems involving estimation and measurement of length, area, time, temperature, volume, weight, and angles.

(A) Estimate measurements (including circumference) and evaluate reasonableness of results;	10, 11, 75	136
(B) Select and use appropriate units, tools, or formulas to measure and to solve problems involving length (including perimeter), area, time, temperature, volume, and weight;	10, 11, 13, 41, 43, 59, 63, 75, 76, 89, 92, 100, 108, 121, 124, 129, 145, 148	*16, 21, 28, 39, 41, 42, 54, 55, 56, 59, 60, 63, 65, 77, 82, 84, 89, 94, 101, 118, 136, 137, 148 Activity 3 Density: Activity 13, Velocity: Activity 14
(C) Measure angles; and	80, 88, 148	Activity 2
(D) Convert measures within the same measurement system (customary and metric) based on relationships between units.	4, 10, 11, 13, 41, 126, 141, 151	21, 28, 39, 42, 44, 54, 65, 74, 84, 89, 111

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PROBABILITY AND STATISTICS		
(6.9) Probability and statistics. The student uses experimental and theoretical probability to make predictions.		
(A) Construct sample spaces using lists and tree diagrams; and	2, 8, 34, 65	4, 5, 11, *16, 17, 19, 34, 40, 41, 45, 61, 68, 71, 73, 75, 79, 80, 81, 85, 92, 97, 99, 108, 116, 119, 123, 125, 135, 146, 149, 151, 153
(B) Find the probabilities of a simple event and its complement and describe the relationship between the two.	34, 97, 99, 133, 150	138, 146, 147
(6.10) Probability and statistics. The student uses statistical representations to analyze data.		
(A) Select and use an appropriate representation for presenting and displaying different graphical representations of the same data including line plot, line graph, bar graph, and stem and leaf plot;	2, *8, 65, 69, 70	4, 11, 33, 43, 52 Activity 9, 10, 11
(B) Identify mean (using concrete objects and pictorial models), median, mode, and range of a set of data	65 Averages: 55, 120	Averages: 47, 89, 138 Activity 10
(C) Sketch circle graphs to display data; and	*94, *98	Venn Diagrams: 33, 43, 52, 64
(D) Solve problems by collecting, organizing, displaying, and interpreting data.	2, 45, 65, 70	4, 11, 33, 43, 52, 64, 65, 75 Activity 9, 10, 11

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UNDERLYING PROCESSES, MATHEMATICAL TOOLS		
(6.11) Underlying processes and mathematical tools. The student applies Grade 6 mathematics to solve problems connected to everyday experiences, investigations in other disciplines, and activities in and outside of school.		
(A) Identify and apply mathematics to everyday experiences, to activities in and outside of school, with other disciplines, and with other mathematical topics;	1, 2, 4, 6, 7, 8, 9, 20, 29, 31, 40, 41, 42, 43, 55, 58, 63, 65, 67, 69, 70, 72, 79, 86, 87, 89, 92, 94, 96, 99, 117, 120, 127, 133, 137, 141, 151, 152, 153	2, 4, 6, 7, 9, 10, 11, 12, 13, 15, 16, 17, 18, 19, 21, 24, 25, 26, 28, 30, 33, 35, 37, 38, 39, 41, 42, 43, 44, 46, 47, 48, 52, 54, 55, 56, 60, 63, 64, 65, 68, 69, 76, 80, 82, 85, 90, 91, 92, 94, 99, 101, 104, 105, 120, 124, 134, 136, 137, 138, 139, 140, 143, 145, 148, 149, 150, 151, 154
(B) Use a problem-solving model that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness;	1, 4, 6, 7, 8, 9, 20, 29, 31, 40, 41, 42, 43, 55, 58, 63, 65, 67, 69, 70, 72, 79, 84, 86, 87, 89, 92, 94, 96, 117, 120, 127, 133, 137, 141, 151, 152, 153	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 24, 25, 26, 27, 28, 30, 31, 32, 33, 35, 37, 38, 39, 41, 42, 43, 44, 45, 46, 47, 48, 51, 52, 53, 54, 55, 56, 57, 58, 60, 61, 63, 64, 65, 66, 68, 69, 71, 73, 76, 78, 80, 81, 82, 83, 85, 87, 90, 91, 92, 94, 95, 99, 101, 102, 103, 104, 105, 108, 109, 115, 116, 119, 120, 123, 124, 125, 126, 128, 129, 130, 131, 134, 136, 137, 138, 139, 140, 141, 143, 145, 148, 149, 150, 151, 154
(C) Select or develop an appropriate problem-solving strategy from a variety of different types, including drawing a picture, looking for a pattern, systematic guessing and checking, acting it out, making a table, working a simpler problem, or working backwards to solve a problem; and	1, 4, 6, 7, 8, 9, 20, 29, 31, 40, 41, 42, 43, 55, 58, 63, 65, 67, 69, 70, 72, 79, 84, 86, 87, 89, 92, 94, 96, 117, 120, 127, 133, 137, 141, 151, 152, 153	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 24, 25, 26, 27, 28, 30, 31, 32, 33, 35, 37, 38, 39, 41, 42, 43, 44, 45, 46, 47, 48, 51, 52, 53, 54, 55, 56, 57, 58, 60, 61, 63, 64, 65, 66, 68, 69, 71, 73, 76, 78, 80, 81, 82, 83, 85, 87, 90, 91, 92, 94, 95, 99, 101, 102, 103, 104, 105, 108, 109, 115, 116, 119, 120, 123, 124, 125, 126, 128, 129, 130, 131, 134, 136, 137, 138, 139, 140, 141, 143, 145, 148, 149, 150, 151, 154
(D) Select tools such as real objects, manipulatives, paper/pencil, and technology or techniques such as mental math, estimation, and number sense to solve problems.	1, 4, 7, 8, 20, 29, 40, 43, 58, 63, 65, 67, 69, 70, 84, 86, 92, 94, 96, 99, 117, 127, 133, 137, 141, 151	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 24, 25, 26, 28, 30, 31, 32, 33, 35, 37, 38, 39, 41, 42, 43, 44, 45, 46, 47, 48, 51, 52, 54, 55, 56, 57, 58, 60, 61, 63, 64, 65, 66, 68, 69, 71, 73, 76, 78, 80, 81, 82, 83, 85, 87, 90, 91, 92, 94, 99, 101, 102, 103, 104, 105, 120, 123, 124, 125, 126, 128, 129, 130, 131, 134, 136, 137, 138, 140, 141, 143, 148, 149, 150, 151, 154

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(6.12) Underlying processes and mathematical tools. The student communicates about Grade 6 mathematics through informal and mathematical language, representations, and models.		
(A) Communicate mathematical ideas using language, efficient tools, appropriate units, and graphical, numerical, physical, or algebraic mathematical models; and	1, 3, 4, 6, 7, 8, 9, 20, 29, 31, 40, 41, 42, 43, 55, 58, 63, 65, 69, 70, 84, 86, 92, 94, 96, 99, 117, 127, 133, 137, 141, 151	2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 24, 25, 26, 27, 28, 30, 31, 32, 33, 35, 37, 38, 39, 41, 42, 43, 44, 45, 46, 47, 48, 51, 52, 54, 55, 56, 57, 58, 60, 61, 63, 64, 65, 66, 68, 69, 71, 73, 76, 78, 80, 81, 82, 83, 85, 87, 90, 91, 92, 94, 99, 101, 102, 103, 104, 115, 120, 123, 124, 125, 126, 128, 129, 130, 131, 134, 136, 137, 138, 139, 140, 141, 143, 145, 148, 149, 150, 151, 154
(B) Evaluate the effectiveness of different representations to communicate ideas.	1, 3, 4, 6, 7, 8, 9, 20, 29, 31, 40, 41, 42, 43, 55, 58, 63, 65, 69, 70, 84, 86, 92, 94, 96, 99, 117, 127, 133, 137, 141, 151	2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 24, 25, 26, 27, 28, 30, 31, 32, 33, 35, 37, 38, 39, 41, 42, 43, 44, 45, 46, 47, 48, 51, 52, 54, 55, 56, 57, 58, 60, 61, 63, 64, 65, 66, 68, 69, 71, 73, 76, 78, 80, 81, 82, 83, 85, 87, 90, 91, 92, 94, 99, 101, 102, 103, 104, 115, 120, 123, 124, 125, 126, 128, 129, 130, 131, 134, 136, 137, 138, 139, 140, 141, 143, 145, 148, 149, 150, 151, 154
(6.13) Underlying processes and mathematical tools. The student uses logical reasoning to make conjectures and verify conclusions.		
(A) Make conjectures from patterns or sets of examples and non-examples; and	4, 6, 7, 8, 20, 29, 40, 41, 42, 58, 63, 65, 69, 70, 84, 94, 149, 151	1, 4, 5, 6, 8, 9, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 26, 30, 32, 33, 41, 43, 45, 51, 52, 53, 57, 58, 60, 61, 64, 65, 66, 69, 71, 75, 80, 81, 91, 95, 99, 100, 103, 104, 106, 107, 112, 114, 121, 122, 127, 128, 129, 131, 139, 140, 141, 149, 151, 154
(B) Validate his/her conclusions using mathematical properties and relationships.	4, 6, 7, 8, 20, 29, 40, 41, 42, 58, 63, 65, 69, 70, 84, 94, 149, 151	1, 4, 5, 6, 8, 9, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 26, 30, 32, 33, 41, 43, 45, 51, 52, 53, 57, 58, 60, 61, 64, 65, 66, 69, 71, 75, 80, 81, 91, 95, 99, 100, 103, 104, 106, 107, 112, 114, 121, 122, 127, 128, 129, 131, 139, 140, 141, 149, 151, 154