

Texas Essential Knowledge and Skills	Excel Math Lesson Numbers	Stretch Lesson Numbers Activity Numbers
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NUMBER, OPERATION, QUANTITATIVE REASONING

(4.1) The student uses place value to represent whole numbers and decimals.

(A) Use place value to read, write, compare, and order whole numbers through 999,999,999; and	1, 2, 3, 7, 8, 17, 22, 27, 28, 36, 42, 43, 48, 52, 53, 61, 74, 82, 83, 102, 103, 113, 126, 133, 135, 145 Ordinals: 46	8, 13, 17, 21, 63, 68, 90, 105, 113, 122
(B) Use place value to read, write, compare, and order decimals involving tenths and hundredths, including money, using concrete objects and pictorial models.	*9, 11, 16, 26, 75, 85, 86, 100, 105, 117, 131, 141, 142, 145	30, 146

(4.2) The student describes and compares fractional parts of whole objects or sets of objects.

(A) Use concrete objects and pictorial models to generate equivalent fractions;	15, *16, 67, 75, 88, 99, 110, 114, 118, 127, 128	
(B) Model fraction quantities greater than one using concrete objects and pictorial models;	67, 81, 88, 112, 118, 154	
(C) Compare and order fractions using concrete objects and pictorial models; and	75, 79, 88, 114, 118, 125, 145 Add / Sub: 67, 76, 81 Multiply: 153, 154	
(D) Relate decimals to fractions that name tenths and hundredths using concrete objects and pictorial models.	85, 100, 118, 137, 145, 148 Percent: 127, 128, 136, 143	

(4.3) The student adds and subtracts to solve meaningful problems involving whole numbers and decimals.

(A) Use addition and subtraction to solve problems involving whole numbers; and	1, 2, 3, 6, 7, 8, 9, 11, 13, 14, 22, 24, 34, 35, 36, 41, 49, 72, 80, 90, 103, 113, 117, 122, 123, 126, 150	3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 17, 18, 19, 20, 21, 22, 25, 26, 28, 29, 30, 31, 33, 35, 39, 43, 47, 48, 52, 56, 62, 69, 72, 75, 76, 77, 80, 87, 89, 90, 92, 93, 95, 102, 105, 106, 113, 115, 116, 122, 124, 126, 128, 129, 130, 132, 133, 136, 137, 138, 142, 143, 145, 147, 148, 151, 155 Activity 8
(B) Add and subtract decimals to the hundredths place using concrete objects and pictorial models.	9, 11, 26, 86, 104 Multiply / Divide: 61, 107, 109, 115, 116, 139, 141, 142, 148	83, 91, 101, 103, 111, 114, 146

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(4.4) The student multiplies and divides to solve meaningful problems involving whole numbers.		
(A) Model factors and products using arrays and area models;	12, 21, 24, *25, 36, 49, 50, 84, 87, 89, 93, 94, 106, 135, 151 Multiples: 51, 91	
(B) Represent multiplication and division situations in picture, word, and number form;	12, 17, 21, 24, 27, 28, 32, 33, 34, 36, 42, 43, 47, 49, 52, 53, 54, 59, 62, 72, 73, 82, 83, 84, 87, 89, 146, 151	
(C) Recall and apply multiplication facts through 12 x 12;	12, 13, 14, 17, 18, 19, 21, 22, 23, 24, 31, 36, 46, 47, 48, 49, 51, 52, 53, 59, 61, 62, 71, 73, 76, 77, 78, 81, 84, 87, 91, 93, 98, 102, 103, 129, 131, 132, 137, 141 Division Facts: 26, 29, 31, 46, 48, 49, 51, 52, 56, 59, 61, 62, 66, 71, 73, 74, 76, 77, 78, 79, 81, 84, 87, 89, 91, 92, 93, 94, 96, 98, 101, 102, 103, 108, 112, 114, 115, 117, 124, 129, 131, 132, 136, 137, 138, 141, 142	16
(D) Use multiplication to solve problems (no more than two digits times two digits without technology); and	22, 25, 31, 34, 51, 56, 63, 68, 74, 90, 93, 94, 99, 105, 109, 121, 122, 123, 134, 135, 143, 155	14, 15, 16, 19, 22, 27, 29, 31, 41, 45, 56, 67, 69, 71, 79, 80, 89, 93, 96, 104, 109, 114, 115, 117, 118, 125, 129, 132, 135, 137, 142, 148, 150, 155 Activity 8
(E) Use division to solve problems (no more than one-digit divisors and three-digit dividends without technology).	17, 21, 22, 31, 33, 54, 109, 122, 123, 124, 138, 139, 150	27, 31, 39, 41, 55, 59, 69, 75, 89, 99, 104, 109, 115, 117, 121, 148, 150, 153 Activity 8
(4.5) The student estimates to determine reasonable results.		
(A) Round whole numbers to the nearest ten, hundred, or thousand to approximate reasonable results in problem situations;	45, 55, 69, 104, 129 Decimals: 131	
(B) Use strategies including rounding and compatible numbers to estimate solutions to multiplication and division problems.	45, 69, 90, 104, 129 Averages, Mean, Median, Mode: 122, 123, 150	6, 7, 8, 11, 14, 21, 31, 39, 45, 56, 75, 80, 89, 99, 109, 132

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PATTERNS, RELATIONSHIPS, ALGEBRAIC THINKING

(4.6) The student uses patterns in multiplication and division.		
(A) Use patterns and relationships to develop strategies to remember basic multiplication and division facts (such as the patterns in related multiplication and division number sentences (fact families) such as $9 \times 9 = 81$ and $81 \div 9 = 9$); and	6, 21, 23, 25, 47, 56, 84, 87, 89, 91, 108, 151, 152 Non-number pattern: 58, 101	16, 67, 118 Non-number pattern: 60
(B) Use patterns to multiply by 10 and 100.	47, 115	
(4.7) The student uses organizational structures to analyze and describe patterns and relationships.		
The student is expected to describe the relationship between two sets of related data such as ordered pairs in a table.	44, 56, 139, 152 Line Equations / unknowns: 14, 22, 34, 35, 74, 87, 108, 134, 152	12, 35, 43, 62, 71, 79, 97, 112, 121, 124, 145, 151 Equations / unknowns: 9, 15, 19, 20, 28, 31, 39, 45, 52, 56, 75, 80, 89, 93, 99, 104, 109, 128, 129, 143

GEOMETRY AND SPATIAL REASONING

(4.8) The student identifies and describes attributes of geometric figures using formal geometric language.		
(A) Identify and describe right, acute, and obtuse angles;	70, 78, 98, 132	
(B) Identify and describe parallel and intersecting (including perpendicular) lines using concrete objects and pictorial models; and	38, 39, 70 Intersecting sets: 44	
(C) Use essential attributes to define two- and three-dimensional geometric figures.	15, 39, 40, 58, 71, 95, 96, 98, 101, 132, 144	4, 24, 32, 44, 53, 58, 60, 65, 66, 78, 82, 94, 100, 107, 110, 119, 123, 131, 140, 141 Activity 3, 4, 9, 10
(4.9) The student connects transformations to congruence and symmetry.		
(A) Demonstrate translations, reflections, and rotations using concrete models;	60	*24, 36, *94, *110, 140, 141
(B) Use translations, reflections, and rotations to verify that two shapes are congruent; and	60	*32, *65, *94, *110



Texas 4th Grade TEKS / Excel Math Correlation

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(C) Use reflections to verify that a shape has symmetry.	30, *60	*32, *53, *94, *110
(4.10) The student recognizes the connection between numbers and their properties and points on a line.		
The student is expected to locate and name points on a number line using whole numbers, fractions such as halves and fourths, and decimals such as tenths.	45, 55, *105, 133, 145 Coordinate Points: 65, 97, 120, 130, 140	Activity 12 Coordinate Points: Activity 5
MEASUREMENT		
(4.11) The student applies measurement concepts. The student is expected to estimate and measure to solve problems involving length (including perimeter) and area. The student uses measurement tools to measure capacity/volume and weight/mass.		
(A) Estimate and use measurement tools to determine length (including perimeter), area, capacity and weight/mass using standard units SI (metric) and customary;	29, 30, 37, 64, 68, 96, 105, 120, 121, 147, 149, 155 Distance / Speed: 92	23, 49, 76, 87, 95, 118, 125, 133, 134, 135, 137, 139, 144, 149, 150, 154 Activity 7 Distance: 35, 117, 130, 138
(B) Perform simple conversions between different units of length, between different units of capacity, and between different units of weight within the customary measurement system;	30, 37, 63, 64, 73, 87, 121, 123, 124	118
(C) Use concrete models of standard cubic units to measure volume;	95, 105	
(D) Estimate volume in cubic units; and	95, 105	
(E) Explain the difference between weight and mass.	122, 123	*23, 49, *76, *87, *95, *133, *134, *144, *154
(4.12) The student applies measurement concepts. The student measures time and temperature (in degrees Fahrenheit and Celsius).		
(A) Use a thermometer to measure temperature and changes in temperature;	30	
(B) Use tools such as a clock with gears or a stopwatch to solve problems involving elapsed time.	18, 57, 111 Days / Months: 19, 66, 90, 124	1, 54, 70, 148 Days / Months: 10, 18, 43

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PROBABILITY AND STATISTICS

(4.13) The student solves problems by collecting, organizing, displaying, and interpreting sets of data.		
(A) Use concrete objects or pictures to make generalizations about determining all possible combinations of a given set of data or of objects in a problem situation;	5, 77	85, 121, 141, 155 Activity 1, 2
(B) Interpret bar graphs.	20, 119 Circle Graph: 5 Line Graph: 80	Graphing Activity: 1, 2, 3, 4, 5, 6

UNDERLYING PROCESSES AND MATHEMATICAL TOOLS

(4.14) The student applies Grade 4 mathematics to solve problems connected to everyday experiences and activities in and outside of school.		
(A) Identify the mathematics in everyday situations;	1, 4, 5, 9, 10, 15, 17, 18, 19, 26, 31, 33, 41, 46, 51, 54, 56, 57, 66, 69, 72, 77, 90, 92, 104, 109, 111, 119, 121, 122, 123, 129, 139, 143	1, 2, 5, 10, 12, 14, 16, 18, 22, 23, 27, 33, 34, 35, 37, 38, 40, 41, 42, 43, 46, 47, 48, 50, 51, 54, 55, 57, 59, 61, 62, 64, 71, 72, 73, 74, 76, 77, 81, 83, 84, 86, 88, 91, 97, 98, 101, 103, 108, 111, 112, 114, 115, 116, 117, 118, 120, 124, 125, 127, 130, 133, 136, 138, 139, 144, 147, 148, 153, 154, 155 Graphing Activity: 1, 2, 3, 4, 5, 6 Activity 1, 8, 11
(B) Solve problems that incorporate understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness;	1, 4, 5, 9, 10, 31, 33, 41, 54, 56, 66, 69, 72, 90, 92, 104, 109, 111, 119, 121, 122, 123, 129, 139, 143	1, 2, 5, 10, 12, 14, 16, 18, 22, 23, 27, 33, 34, 35, 37, 38, 40, 41, 42, 43, 46, 47, 48, 50, 51, 54, 55, 57, 59, 61, 62, 64, 71, 72, 73, 74, 76, 77, 81, 83, 84, 86, 88, 91, 97, 98, 101, 103, 108, 111, 112, 114, 115, 116, 117, 118, 120, 124, 125, 127, 130, 133, 136, 138, 139, 144, 147, 148, 152, 153, 154, 155 Graphing Activity: 1, 2, 3, 4, 5, 6 Activity 1, 8, 11

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(C) Select or develop an appropriate problem-solving plan or strategy, 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;	1, 4, 5, 9, 10, 31, 33, 41, 54, 56, 66, 69, 72, 90, 92, 104, 109, 111, 119, 121, 122, 123, 129, 139, 143	1, 2, 5, 10, 12, 14, 16, 18, 22, 23, 27, 33, 34, 35, 37, 38, 40, 41, 42, 43, 46, 47, 48, 50, 51, 54, 55, 57, 59, 61, 62, 64, 71, 72, 73, 74, 76, 77, 81, 83, 84, 86, 88, 91, 97, 98, 101, 103, 108, 111, 112, 114, 115, 116, 117, 118, 120, 124, 125, 127, 130, 133, 136, 138, 139, 144, 147, 148, 152, 153, 154, 155 Graphing Activity: 1, 2, 3, 4, 5, 6 Activity 1, 8, 11
(D) Use tools such as real objects, manipulatives, and technology to solve problems.	4, 5, 9, 33, 41, 54, 56, 66, 72, 92, 104, 109, 111, 119, 121, 122, 123, 143	1, 2, 10, 12, 14, 16, 18, 22, 23, 27, 33, 37, 38, 41, 43, 47, 54, 59, 61, 62, 71, 72, 76, 81, 83, 86, 91, 97, 101, 103, 111, 112, 114, 115, 116, 117, 118, 124, 125, 133, 139, 144, 147, 148, 153, 154, 155 Graphing Activity: 1, 2, 3, 4, 5, 6 Activity 1, 8, 11
(4.15) The student communicates about Grade 4 mathematics using informal language.		
(A) Explain and record observations using objects, words, pictures, numbers, and technology; and	4, 5, 33, 41, 56, 66, 72, 109, 119, 121	2, 10, 12, 18, 23, 34, 43, 62, 86, 97, 112, 124, 154 Activity 1, 2
(B) Relate informal language to mathematical language and symbols.	4, 5, 10, 33, 41, 56, 66, 72, 109, 119, 121	2, 10, 12, 18, 23, 34, 43, 62, 86, 97, 112, 124, 154 Activity 1, 2
(4.16) The student uses logical reasoning.		
(A) Make generalizations from patterns or sets of examples and non-examples; and	4, 5, 41, 56, 66, 72, 109, 119, 121	10, 12, 16, 18, 38, 43, 62, 86, 97, 112, 124, 154 Activity 1, 2
(B) Justify why an answer is reasonable and explain the solution process.	4, 5, 41, 56, 66, 72, 109, 119, 121	10, 12, 16, 18, 38, 43, 62, 86, 97, 112, 124, 154 Activity 1, 2