



# Standards Correlation: Symphony Math<sup>®</sup> and TEKS - Mathematics

Texas Essential Knowledge and Skills for Mathematics		Symphony Math	
Standard	The student is expected to:	Stage References	Concepts
§111.2.b.2.A	count forward and backward to at least 20 with and without objects	1.1, 1.3, 1.4, 2.1	Sequencing, Counting Forward, Counting Backward
§111.2.b.2.B	read, write, and represent whole numbers from 0 to at least 20 with and without objects or pictures	1.2	Identifying Numbers (connection between models and numbers pervasive throughout curriculum)
§111.2.b.2.C	count a set of objects up to at least 20 and demonstrate that the last number said tells the number of objects in the set regardless of their arrangement or order	1.1, 1.2, 4.1	Sequencing, Identifying Numbers
§111.2.b.2.D	recognize instantly the quantity of a small group of objects in organized and random arrangements	1.1-1.4, 4.1	Sequencing, Counting Forward, Counting Backward, Identifying Numbers, Ten as a Unit
§111.2.b.2.E	generate a set using concrete and pictorial models that represents a number that is more than, less than, and equal to a given number up to 20	2.1-2.5	Find 'One More', Find 'One Less', Find 'More', Find 'Less', Same
§111.2.b.2.F	generate a number that is one more than or one less than another number up to at least 20	2.1-2.2	Find 'One More', Find 'One Less'
§111.2.b.2.G	compare sets of objects up to at least 20 in each set using comparative language	2.1-2.5	Find 'One More', Find 'One Less', Find 'More', Find 'Less', Same

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§111.2.b.2.H	use comparative language to describe two numbers up to 20 presented as written numerals	2.1-2.5	Find 'One More', Find 'One Less', Find 'More', Find 'Less', Same
§111.2.b.2.I	compose and decompose numbers up to 10 with objects and pictures	3.1-3.7, 4.1, 4.2, 4.4	Addition & Subtraction to sums of 5, and parts of 10, with models, numbers, auditory, and written expressions
§111.2.b.3.A	model the action of joining to represent addition and the action of separating to represent subtraction	3.1-3.7	Addition & Subtraction to sums of 5, with models, numbers, auditory, and written expressions
§111.2.b.3.B	solve word problems using objects and drawings to find sums up to 10 and differences within 10	3.1-3.7, 4.1, 4.2, 4.4	Addition & Subtraction to sums of 5, and parts of 10, with models, numbers, auditory, and written expressions
§111.2.b.3.C	explain the strategies used to solve problems involving adding and subtracting within 10 using spoken words, concrete and pictorial models, and number sentences	3.1-3.7, 4.1, 4.2, 4.4	Addition & Subtraction to sums of 5, and parts of 10, with models, numbers, auditory, and written expressions
§111.2.b.5	apply mathematical process standards to identify the pattern in the number word list. The student is expected to recite numbers up to at least 100 by ones and tens beginning with any given number	1.1-1.4, 7.1-7.3	Sequencing, Counting Forward, Counting Backward, Identifying Numbers, Identifying 10s, Ordering 10s, Counting Backward by 10s
§111.3.b.2.A	recognize instantly the quantity of structured arrangements	All Content	Program uses collection of objects via Dot Cards, Unit Bars, and Number Lines to encourage subitizing and concrete-abstract connection within and between concepts.
§111.3.b.2.B	use concrete and pictorial models to compose and decompose numbers up to 120 in more than one way as so many hundreds, so many tens, and so many ones	Stages 1,4,7	Progression of modeling 1s, 10s, teens, and numbers up to 100 with multiple representations
§111.3.b.2.C	use objects, pictures, and expanded and standard forms to represent numbers up to 120	Stages 1,4,7	Progression of modeling 1s, 10s, teens, and numbers up to 100 with multiple representations, and relating those models to abstract representation with numbers only and auditory recall.

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§111.3.b.2.D	generate a number that is greater than or less than a given whole number up to 120	2.1-2.4, 5.1-5.2, 7.4-7.5	Find 'One More', Find 'One Less', Find 'More', Find 'Less', Greater Than, Less Than, Find '10 more', Find '10 less'
§111.3.b.2.E	use place value to compare whole numbers up to 120 using comparative language	5.1-5.3, 7.9	Greater Than, Less Than, Equals, Compare 10s
§111.3.b.2.F	order whole numbers up to 120 using place value and open number lines	1.1,1.2, 7.2, 7.3	Sequencing, Identifying Numbers, Identifying Tens, Ordering Tens
§111.3.b.2.G	represent the comparison of two numbers to 100 using the symbols $>$ , $<$ , or $=$	5.1-5.3, 7.9	Greater Than, Less Than, Equals, Compare 10s
§111.3.b.3.A	use concrete and pictorial models to determine the sum of a multiple of 10 and a one-digit number in problems up to 99	4.3, 7.4-7.7	10 Plus, Find 'Ten More', Related 1s and 10s, Combinations of 100
§111.3.b.3.B	use objects and pictorial models to solve word problems involving joining, separating, and comparing sets within 20 and unknowns as any one of the terms in the problem such as $2 + 4 = [ ]$ ; $3 + [ ] = 7$ ; and $5 = [ ] 3$	3.1-3.4, 4.2-4.4, 6.1-6.5	Addition and Subtraction to 5, 10, and 20, with missing result, missing part(s), with objects in word problem contexts
§111.3.b.3.C	compose 10 with two or more addends with and without concrete objects	4.1-4.4	Ten as a Unit, Making 10, Subtracting with 10, in concrete and and abstract modes
§111.3.b.3.D	apply basic fact strategies to add and subtract within 20, including making 10 and decomposing a number leading to a 10	6.1-6.6	Add & Subtract to 20 with missing whole, missing part(s), Fact Families, Three-part Addition and Subtraction
§111.3.b.3.E	explain strategies used to solve addition and subtraction problems up to 20 using spoken words, objects, pictorial models, and number sentences	6.1-6.6	Add & Subtract to 20 using models, number sentence construction, and math language describing parts-whole relationships.
§111.3.b.3.F	generate and solve problem situations when given a number sentence involving addition or subtraction of numbers within 20	6.1-6.6	Add & Subtract to 20 using models, number sentence construction, and math language describing parts-whole relationships.

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§111.3.b.5.A	recite numbers forward and backward from any given number between 1 and 120	1.3, 1.4, 7.2, 7.3	Counting Forward, Backward with 1s, 10s
§111.3.b.5.B	skip count by twos, fives, and tens to determine the total number of objects up to 120 in a set	11.1-11.3	Skip Counting, Adding 2s, 3s, and 4s, Equal Groupings
§111.3.b.5.C	use relationships to determine the number that is 10 more and 10 less than a given number up to 120	7.4, 7.5	Find '10 more', Find '10 less'
§111.3.b.5.D	represent word problems involving addition and subtraction of whole numbers up to 20 using concrete and pictorial models and number sentences	6.1-6.6	Add & Subtract to 20 using models, number sentence construction, and math language describing parts-whole relationships.
§111.3.b.5.E	understand that the equal sign represents a relationship where expressions on each side of the equal sign represent the same value(s)	All Content	All program content mixes orientation of equals sign to ensure that students attend to the true meaning of the equals sign, rather than understanding it as a procedural mechanism for 'the solution.'
§111.3.b.5.F	determine the unknown whole number in an addition or subtraction equation when the unknown may be any one of the three or four terms in the equation	3.1-3.7, 4.1.-4.4, 6.1-6.4, 7.8, 8.1-8.8	Addition and Subtraction to 100s, with missing whole, part, and parts, in 2- and 3-part add & subtract number sentences.
§111.3.b.5.G	apply properties of operations to add and subtract two or three numbers	3.1-3.7, 4.1.-4.4, 6.1-6.4, 7.8, 8.1-8.8	Addition and Subtraction to 100s, with missing whole, part, and parts, in 2- and 3-part add & subtract number sentences.
§111.4.b.2.A	use concrete and pictorial models to compose and decompose numbers up to 1,200 in more than one way as a sum of so many thousands, hundreds, tens, and ones	8.1-8.8, 9.6, 9.7, 10.1-10.7, 12.1-12.7	Addition and Subtraction with 1s, 10s, and 100s, using models and numbers, with one and two missing parts or solution.
§111.4.b.2.C	generate a number that is greater than or less than a given whole number up to 1,200	7.9, 8.9, 9.8, 10.8	Compare 10s, Compare 2-digit numbers, Compare 100s, Compare 3-digit numbers
§111.4.b.2.D	use place value to compare and order whole numbers up to 1,200 using comparative language, numbers, and symbols (>, <, or =)	7.9, 8.9, 9.8, 10.9	Compare 10s, Compare 2-digit numbers, Compare 100s, Compare 3-digit numbers

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Standard	The student is expected to:	Stage References	Concepts
§111.4.b.2.F	name the whole number that corresponds to a specific point on a number line	All Sequencing, Addition & Subtraction Content	Number Line used as a primary model for understanding number system, including place value and parts-whole operations.
§111.4.b.3.A	partition objects into equal parts and name the parts, including halves, fourths, and eighths, using words	14.1	Dividing a Whole
§111.4.b.3.B	explain that the more fractional parts used to make a whole, the smaller the part; and the fewer the fractional parts, the larger the part	14.1-14.6	Dividing a Whole, Creating Unit Fractions, Creating Non-Unit Fractions, Whole Numbers as Fractions, Comparing Fractions, Equivalent Fractions
§111.4.b.3.C	use concrete models to count fractional parts beyond one whole using words and recognize how many parts it takes to equal one whole	14.1-14.6	Dividing a Whole, Creating Unit Fractions, Creating Non-Unit Fractions, Whole Numbers as Fractions, Comparing Fractions, Equivalent Fractions
§111.4.b.3.D	identify examples and non-examples of halves, fourths, and eighths	14.1, 14.2, 14.3	Dividing a Whole, Creating Unit Fractions, Creating Non-Unit Fractions
§111.4.b.4.A	recall basic facts to add and subtract within 20 with automaticity	MR 1-6	Add & Subtract Fluency to Sums of 5, 10, and 20 - Missing Sums and Missing Parts
§111.4.b.4.B	add up to four two-digit numbers and subtract two-digit numbers using mental strategies and algorithms based on knowledge of place value and properties of operations	6.6, 8.5-8.7, 10.5-10.7, 12.2-12.7	3-part Addition and Subtraction with 1-digit, 2-digit, and 3-digit numbers.
§111.4.b.4.C	solve one-step and multi-step word problems involving addition and subtraction within 1,000 using a variety of strategies based on place value, including algorithms	12.1-12.7	Addition and Subtraction word problems with 2- and 3-digit numbers, with regrouping
§111.4.b.6.A	model, create, and describe contextual multiplication situations in which equivalent sets of concrete objects are joined	11.3, 13.1-3	Equal Groupings, Introduction to Multiplication (unknown product, number of groups, size of group)

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§111.4.b.6.B	model, create, and describe contextual division situations in which a set of concrete objects is separated into equivalent sets	13.4-13.6	Intro to Division, Missing Dividend, and Missing Divisor
§111.4.b.7.B	use an understanding of place value to determine the number that is 10 or 100 more or less than a given number up to 1,200	8.6, 8.7, 9.4, 9.5, 10.6, 10.7	Find '10 more', Find '10 less', Find '100 more', Find '100 less', Part-Whole: 1s, 10s, and 100s (+100, -100)
§111.4.b.7.C	represent and solve addition and subtraction word problems where unknowns may be any one of the terms in the problem	All Addition and Subtraction Content	Word Problems (with language of math and real world contexts) use missing whole and missing part
§111.5.b.3.A	represent fractions greater than zero and less than or equal to one with denominators of 2, 3, 4, 6, and 8 using concrete objects and pictorial models, including strip diagrams and number lines	14.1-14.4, 17.1-17.6, 18.1-18.4	Introduction to Fractions, Unit Fractions, and Non-Unit Fractions, with Number Lines and Strip Diagrams
§111.5.b.3.B	determine the corresponding fraction greater than zero and less than or equal to one with denominators of 2, 3, 4, 6, and 8 given a specified point on a number line	14.1-14.3	Dividing a Whole, Creating Unit Fractions, Creating Non-Unit Fractions
§111.5.b.3.C	explain that the unit fraction $1/b$ represents the quantity formed by one part of a whole that has been partitioned into $b$ equal parts where $b$ is a non-zero whole number	14.1-14.6	Dividing a Whole, Creating Unit Fractions, Creating Non-Unit Fractions, Whole Numbers as Fractions, Comparing Fractions, Equivalent Fractions
§111.5.b.3.D	compose and decompose a fraction $a/b$ with a numerator greater than zero and less than or equal to $b$ as a sum of parts $1/b$	14.3, 14.4, 17.3-17.6, 18.1-18.4	Creating Non-Unit Fractions, Whole Numbers as Fractions, Addition and Subtraction with Unit Fractions, Addition and Subtraction with Non-Unit Fractions
§111.5.b.3.E	solve problems involving partitioning an object or a set of objects among two or more recipients using pictorial representations of fractions with denominators of 2, 3, 4, 6, and 8	14.4, 17.3-17.6, 18.1-18.4	Whole Numbers as Fractions, Addition and Subtraction with Unit Fractions, Addition and Subtraction with Non-Unit Fractions

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§111.5.b.3.F	represent equivalent fractions with denominators of 2, 3, 4, 6, and 8 using a variety of objects and pictorial models, including number lines	14.6, 17.1	Equivalent Fractions
§111.5.b.3.G	explain that two fractions are equivalent if and only if they are both represented by the same point on the number line or represent the same portion of a same size whole for an area model	14.6, 17.1	Equivalent Fractions
§111.5.b.3.H	compare two fractions having the same numerator or denominator in problems by reasoning about their sizes and justifying the conclusion using symbols, words, objects, and pictorial models	14.5, 17.2	Comparing Fractions (same and different denominators)
§111.5.b.4.A	solve with fluency one-step and two-step problems involving addition and subtraction within 1,000 using strategies based on place value, properties of operations, and the relationship between addition and subtraction	12.1-12.7, MR 7-8	Addition and Subtraction to 1,000 with regrouping, including missing whole, missing parts, and fluency drills with multi-digit 10s (i.e. $120 + 40 = ?$ )
§111.5.b.4.E	represent multiplication facts by using a variety of approaches such as repeated addition, equal-sized groups, arrays, area models, equal jumps on a number line, and skip counting	13.1-13.6	Multiplication and Division, with dot cards, number bars, number lines, missing whole, groups, size of group
§111.5.b.4.F	recall facts to multiply up to 10 by 10 with automaticity and recall the corresponding division facts	MR 9-10	fluency drills with basic multiplication and division facts to 100
§111.5.b.4.G	use strategies and algorithms, including the standard algorithm, to multiply a two-digit number by a one-digit number. Strategies may include mental math, partial products, and the commutative, associative, and distributive properties;	16.1-16.5	Multiplying & Divide by 1s, 10s, and 100s, missing whole, groups, size of group

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§111.5.b.4.H	determine the number of objects in each group when a set of objects is partitioned into equal shares or a set of objects is shared equally	13.2-13.6	Multiplication - unknown number of groups, unknown size of group, Division - unknown total, unknown number of groups, unknown size of group
§111.5.b.4.K	solve one-step and two-step problems involving multiplication and division within 100 using strategies based on objects; pictorial models, including arrays, area models, and equal groups; properties of operations; or recall of facts	15.1-15.4	Multiply and Divide to 100, with Word Problems - create number sentence and create models to represent number sentence
§111.5.b.5.A	represent one- and two-step problems involving addition and subtraction of whole numbers to 1,000 using pictorial models, number lines, and equations;	12.1-12.7	Addition and Subtraction to 1,000 with regrouping, including missing whole, missing parts, with word problems
§111.5.b.5.B	represent and solve one- and two-step multiplication and division problems within 100 using arrays, strip diagrams, and equations	15.1-15.4	Multiply and Divide to 100, with Word Problems - create number sentence and create models to represent number sentence
§111.5.b.5.C	describe a multiplication expression as a comparison such as $3 \times 24$ represents 3 times as much as 24	15.1-15.4	Multiply and Divide to 100 - program uses 'groups of' to reinforce concept of multiplication and division, i.e. '3 groups of 24 are equal to 72'.
§111.5.b.5.D	determine the unknown whole number in a multiplication or division equation relating three whole numbers when the unknown is either a missing factor or product	13.2-3, 13.5-6, 15.2-3, 15.5-6	Multiplication, Missing Groups, Size of Groups, Division, Missing Divisor, Missing Dividend
§111.5.b.7.A	represent fractions of halves, fourths, and eighths as distances from zero on a number line	14.2, 14.3	Creating Unit Fractions, Creating Non-unit Fractions
§111.6.b.2.A	interpret the value of each place-value position as 10 times the position to the right and as one-tenth of the value of the place to its left	16.1-16.5	Multiply & Divide with 1, 10, and 100
§111.6.b.2.E	represent decimals, including tenths and hundredths, using concrete and visual models and money	19.1, 19.2, 19.5, 19.6	Sequencing Decimals, Identifying Decimals, Decimal Notation for 10ths and 100ths, Comparing Decimals



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§111.6.b.2.F	compare and order decimals using concrete and visual models to the hundredths	19.1, 19.2, 19.6	Sequencing Decimals, Identifying Decimals, Comparing Decimals
§111.6.b.2.G	relate decimals to fractions that name tenths and hundredths	19.3, 19.4, 19.5	Equivalence with 10ths and 100ths, Addition with 10ths and 100ths, Decimal Notation for 10ths and 100ths
§111.6.b.2.H	determine the corresponding decimal to the tenths or hundredths place of a specified point on a number line	19.5, 19.6	Decimal Notation for 10ths and 100ths, Comparing Decimals
§111.6.b.3.A	represent a fraction $a/b$ as a sum of fractions $1/b$ , where $a$ and $b$ are whole numbers and $b > 0$ , including when $a > b$	18.1-2, 20.1-20.2	Addition with Non-Unit Fractions, Composing Fractions Greater than 1 Whole, Composing Mixed Numbers
§111.6.b.3.B	decompose a fraction in more than one way into a sum of fractions with the same denominator using concrete and pictorial models and recording results with symbolic representations	18.3-4, 20.3-4	Subtraction with Non-Unit Fractions, Decomposing Fractions Greater than 1 Whole, Decomposing Mixed Numbers
§111.6.b.3.C	determine if two given fractions are equivalent using a variety of methods	17.1-17.2	Equivalent Fractions, Comparing Fractions
§111.6.b.3.D	compare two fractions with different numerators and different denominators and represent the comparison using the symbols $>$ , $=$ , or $<$	17.2	Comparing Fractions (same and different denominators)
§111.6.b.3.E	represent and solve addition and subtraction of fractions with equal denominators using objects and pictorial models that build to the number line and properties of operations	17.1-6, 18.1-4, 20.1-4	Addition & Subtraction with Unit Fractions, Non-Unit Fractions, and Fractions Greater Than 1 Whole
§111.6.b.3.G	represent fractions and decimals to the tenths or hundredths as distances from zero on a number line	19.1-19.6	Sequencing Decimals, Identifying Decimals, Equivalence with 10ths and 100ths, Addition with 10ths and 100ths, Decimal Notation for 10ths and 100ths, Comparing Decimal Numbers

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§111.6.b.4.B	determine products of a number and 10 or 100 using properties of operations and place value understandings	16.1-16.5	Multiply & Divide with 1, 10, and 100
§111.6.b.4.C	represent the product of 2 two-digit numbers using arrays, area models, or equations, including perfect squares through 15 by 15	16.1-16.5	Multiply & Divide with 1, 10, and 100