7.2	Prerequisite Skills/Links to TEKS Vertical Alignment

- use standard, word, and expanded forms to represent numbers up to 1,200 (2)
- 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 (2)
- apply properties of operations to add and subtract two or three numbers (1)
- use objects, pictures, and expanded and standard forms to represent numbers up to 120 (1)
- 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 (1)
- compose and decompose numbers up to 10 with objects and pictures (K)
- begin to understand that numbers 0-10 can be composed and decomposed in various ways to represent a quantity (PK4.V.A.7)

Comparing, Ordering, and Rounding Numbers Using Place Value

- order a set of rational numbers arising from mathematical and real-world contexts (6)
- round decimals to tenths or hundredths (5)
- compare and order two decimals to thousandths and represent comparisons using the symbols >, <, or = (5)
- compare and order decimals using concrete and visual models to the hundredths (4)
- round whole numbers to a given place value through the hundred thousands place (4)
- compare and order whole numbers to 1,000,000,000 and represent comparisons using the symbols >, <, or = (4)
- compare and order whole numbers up to 100,000 and represent comparisons using the symbols >, <, or = (3)
- 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 (2)
- use place value to compare and order whole numbers up to 1,200 using comparative language, numbers, and symbols (>, <, or =) (2)
- use relationships to determine the number that is 10 more and 10 less than a given number up to 120 (1)

(2)
(5• >, <, or =>, <, or =

7.2	Prerequisite Skills/Links to TEKS Vertical Alignment

- compare sets of objects up to 10 using comparative language (e.g., greater/more than, less/fewer than, equal to/same number of) (PK4.V.A.8)
- compare sets of objects up to 5 using comparative language (e.g., more than, less than, same number of) (PK3.V.A.8)

Recognizing Numbers and Counting

- classify whole numbers, integers, rational numbers using a visual representation such as a Venn diagram to describe relationships between sets of numbers (6)
- identify prime and composite numbers (5)
- determine if a number is even or odd using divisibility rules (3)
- determine whether a number up to 40 is even or odd using pairings of objects to represent the number (2)
- generate a number that is greater than or less than a given whole number up to 1,200 (2)
- skip count by twos, ves, and tens to determine the total number of objects up to 120 in a set (1)
- recite numbers forward and backward from any given number between 1 and 120 (1)
- generate a number that is greater than or less than a given whole number up to 120 (1)
- recognize instantly the quantity of structured arrangements (1)
- recite numbers up to at least 100 by ones and tens beginning with any given number (K)
- generate a number that is one more than or one less than another number up to at least 20 (K)
- 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 (K)
- recognize instantly the quantity of a small group of objects in organized and random arrangements (K)
- 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 (K)
- read, write, and represent whole numbers from 0 to at least 20 with and without objects or pictures (K)
- count forward and backward to at least 20 with and without objects (K)
- represent quantities up to 10 (PK4.V.A.6)
- recognize numerals 0-10 (PK4.V.A.5)
- instantly recognize the quantity of up to 6 objects without counting (subitizes) (PK4.V.A.4)

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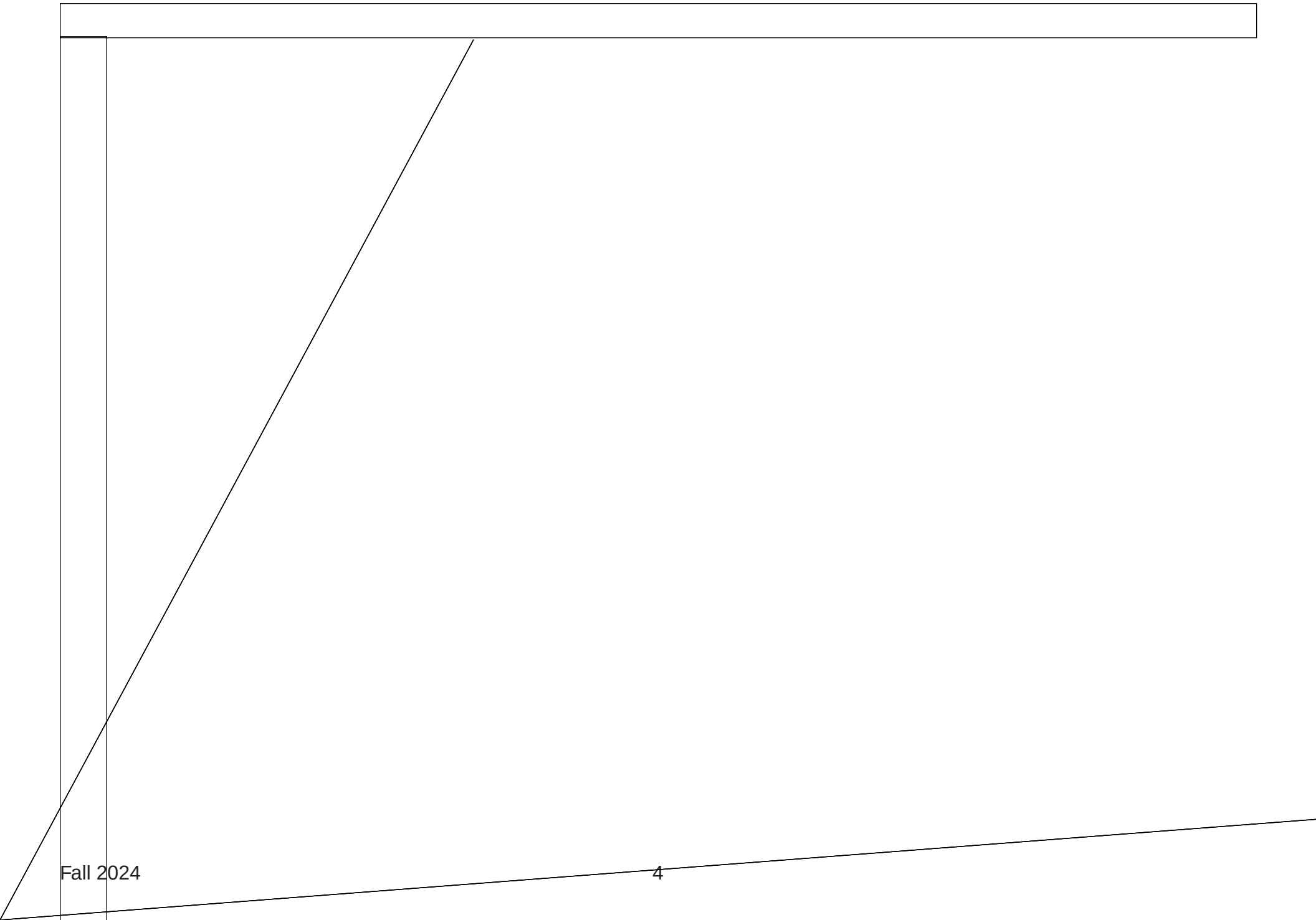


STAAR Reporting Category 1 – Probability and Numerical Representations:	

7.6	Prerequisite Skills/Links to TEKS Vertical Alignment
	• extend representations for division to include fraction notation such as a/b represents the same number as a ÷ b where b 0 (6) • compare two fractions with different numerators and different denominators and represent the comparison using the symbols >, =, or < (4) • determine if two given fractions are equivalent using a variety of methods (4) • 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 (4) • 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 (4) • relate decimals to fractions that name tenths and hundredths (4) • represent decimals, including tenths and hundredths, using concrete and visual models and money (4) • 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 (3) • represent equivalent fractions with denominators of 2, 3, 4, 6, and 8 using a variety of objects and pictorial models, including number lines (3) • 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 (3) • 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 (3) • 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 (3) • 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 (3) • identify examples and non-examples of halves, fourths, and eighths (2) • use concrete models to count fractional parts beyond one whole using words and recognize how many parts it takes to equal one whole (2) • explain that the more fractional parts used to make a whole, the smaller the part: the fewer the fractional parts, the larger the part (2) • partition objects into equal parts and name the parts, including halves, fourths, and eighths, using words (2) • identify examples and non-examples of halves and fourths (1) • partition two-dimensional gures into two and four fair shares or equal parts and describe the parts using words (1)

STAAR Reporting Category 2 – Computations and Algebraic Relationships: The student will demonstrate an understanding of how to perform operations and represent algebraic relationships.	
TEKS Knowledge and Skills Statement/ STAAR-Tested Student Expectations	STAAR Alternate 2 Essence Statement
(7.3) Number and operations. The student applies mathematical process standards to add, subtract, multiply, and divide while solving problems and justifying solutions. The student is expected to: (A) add, subtract, multiply, and divide rational numbers uently; Supporting Standard (B) apply and extend previous understandings of operations to solve problems using addition, subtraction, multiplication, and division of rational numbers. Readiness Standard	Finds solutions to addition, subtraction, multiplication, or division problems.

7.3	Prerequisite Skills/Links to TEKS Vertical Alignment
	Performing a Variety of Operations with Rational Numbers • multiply and divide positive rational numbers uently (6) • add, subtract, multiply, and divide integers uently (6) • represent integer operations with concrete models and connect the actions with the models to standardized algorithms (6) • recognize that dividing by a rational number and multiplying by its reciprocal result in equivalent values (6) • estimate to determine solutions to mathematical and real-world problems involving addition, subtraction, multiplication, or division (5) • solve with uency one- and two-step problems involving multiplication and division, including interpreting remainders (4) • round to the nearest 10, 100, or 1,000 or use compatible numbers to estimate solutions involving whole numbers (4) Adding and Subtracting Whole Numbers, Fractions, and Decimals • add and subtract positive rational numbers uently (5) • represent and solve addition and subtraction of fractions with unequal denominators referring to the same whole using objects and pictorial models and properties of operations (5) • add and subtract whole numbers and decimals to the hundredths place using the standard algorithm (4) • evaluate the reasonableness of sums and differences of fractions using benchmark fractions 0, 1/4, 1/2, 3/4, and 1, referring to the same whole (4)

Continued

7.3	Prerequisite Skills/Links to TEKS Vertical Alignment

Multiplying Whole Numbers, Fractions, and Decimals

- determine, with and without computation, whether a quantity is increased or decreased when multiplied by a fraction, including values greater than or less than one (6)
- represent and solve multiplication of a whole number and a fraction that refers to the same whole using objects and pictorial models, including area models (5)
- solve for products of decimals to the hundredths, including situations involving money, using strategies based on place-value understandings, properties of operations, and the relationship to the multiplication of whole numbers (5)
- represent multiplication of decimals with products to the hundredths using objects and pictorial models, including area models (5)
- multiply with uency a three-digit number by a two-digit number using the standard algorithm (5)
- use strategies and algorithms, including the standard algorithm, to multiply up to a four-digit number by a one-digit number and to multiply a two-digit number by a two-digit number. Strategies may include mental math, partial products, and the commutative, associative, and distributive properties (4)
- represent the product of 2 two-digit numbers using arrays, area models, or equations, including perfect squares through 15 by 15 (4)
- determine products of a number and 10 or 100 using properties of operations and place value understandings (4)
- describe a multiplication expression as a comparison such as 3 × 24 represents 3 times as much as 24 (3)
- 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 (3)
- recall facts to multiply up to 10 by 10 with automaticity and recall the corresponding division facts (3)
- 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 (3)
- determine the total number of objects when equally-sized groups of objects are combined or arranged in arrays up to 10 by 10 (3)
- model, create, and describe contextual multiplication situations in which equivalent sets of concrete objects are joined (2)

Dividing Whole Numbers, Fractions, and Decimals

- divide whole numbers by unit fractions and unit fractions by whole numbers (5)
- represent division of a unit fraction by a whole number and the division of a whole number by a unit fraction such as 1/3 ÷ 7 and 7 ÷ 1/3 using objects and pictorial models, including area models (5)

Continued

7.3	Prerequisite Skills/Links to TEKS Vertical Alignment
	• solve for quotients of decimals to the hundredths, up to four-digit dividends and two-digit whole number divisors, using strategies and algorithms, including the standard algorithm (5) • represent quotients of decimals to the hundredths, up to four-digit dividends and two-digit whole number divisors, using objects and pictorial models, including area models (5) • solve with pro ciency for quotients of up to a four-digit dividend by a two-digit divisor using strategies and the standard algorithm (5) •

STAAR Reporting Category 2 – Computations and Algebraic Relationships: The student will demonstrate an understanding of how to perform operations and represent algebraic relationships.	
TEKS Knowledge and Skills Statement/ STAAR-Tested Student Expectations	STAAR Alternate 2 Essence Statement
(7.4) Proportionality. The student applies mathematical process standards to represent and solve problems involving proportional relationships. The student is expected to: (A) represent constant rates of change in mathematical and real-world problems given pictorial, tabular, verbal, numeric, graphical, and algebraic representations, including d = rt; Readiness Standard (B) calculate unit rates from rates in mathematical and real-world problems; Supporting Standard (C) determine the constant of proportionality (k = y/x) within mathematical and real-world problems; Supporting Standard (D) solve problems involving ratios, rates, and percents, including multi-step problems involving percent increase and percent decrease, and nancial literacy problems. Readiness Standard	Solves problems involving ratios, rates, or percents.

7.4	Prerequisite Skills/Links to TEKS Vertical Alignment
	Representing and Solving Algebraic Relationships • determine if the given value(s) make(s) one-variable, one-step equations or inequalities true (6) • model and solve one-variable, one-step equations and inequalities that represent problems, including geometric concepts (6) • write corresponding real-world problems given one-variable, one-step equations or inequalities (6) • represent solutions for one-variable, one-step equations and inequalities on number lines (6) • write one-variable, one-step equations and inequalities to represent constraints or conditions within problems (6) • represent a given situation using verbal descriptions, tables, graphs, and equations in the form y = kx or y = x + b (6) • write an equation that represents the relationship between independent and dependent quantities from a table (6) • identify independent and dependent quantities from tables and graphs (6) • solve real-world problems to nd the whole given a part and the percent, to nd the part given the whole and the percent, and to nd the percent given the part and the whole, including the use of concrete and pictorial models (6)

Continued

Mathematics

7.4	Prerequisite Skills/Links to TEKS Vertical Alignment

- represent word problems involving addition and subtraction of whole numbers up to 20 using concrete and pictorial models and number sentences (1)
- generate and solve problem situations when given a number sentence involving addition or subtraction of numbers within 20 (1)
- recognize, duplicate, extend, and create patterns (PK4.V.E.3)
- recognize and duplicate patterns (PK3.V.E.3)

Representing and Using Fractions, Decimals, Percents and Probability

- use equivalent fractions, decimals, and percents to show equal parts of the same whole (6)
- generate equivalent forms of fractions, decimals, and percents using real-world problems, including problems that involve money (6)
- represent benchmark fractions and percents such as 1%, 10%, 25%, 33 1/3%, and multiples of these values using 10 by 10 grids, strip diagrams, number lines, and numbers (6)
- represent ratios and percents with concrete models, fractions, and decimals (6)
- give examples of rates as the comparison by division of two quantities having different attributes, including rates as quotients (6)
- give examples of ratios as multiplicative comparisons of two quantities describing the same attribute (6)
- extend representations for division to include fraction notation such as a/b represents the same number as a ÷ b where b 0 (6)
- compare two fractions with different numerators and different denominators and represent the comparison using the symbols >, =, or < (4)
- determine if two given fractions are equivalent using a variety of methods (4)
- 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 (4)
- 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 (4)
- relate decimals to fractions that name tenths and hundredths (4)
- represent decimals, including tenths and hundredths, using concrete and visual models and money (4)
- 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 (3)

Continued

7.4	Prerequisite Skills/Links to TEKS Vertical Alignment
	• represent equivalent fractions with denominators of 2, 3, 4, 6, and 8 using a variety of objects and pictorial models, including number lines (3) • 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 (3) • 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 (3) • 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 (3) • 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 (3) • identify examples and non-examples of halves, fourths, and eighths (2) • use concrete models to count fractional parts beyond one whole using words and recognize how many parts it takes to equal one whole (2) • explain that the more fractional parts used to make a whole, the smaller the part: the fewer the fractional parts, the larger the part (2) • partition objects into equal parts and name the parts, including halves, fourths, and eighths, using words (2) • identify examples and non-examples of halves and fourths (1) • partition two-dimensional gures into two and four fair shares or equal parts and describe the parts using words (1)

STAAR Reporting Category 2 – Computations and Algebraic Relationships: The student will demonstrate an understanding of how to perform operations and represent algebraic relationships.	
TEKS Knowledge and Skills Statement/ STAAR-Tested Student Expectations	STAAR Alternate 2 Essence Statement
(7.7) Expressions, equations, and relationships. The student applies mathematical process standards to represent linear relationships using multiple representations. The student is expected to: (A) represent linear relationships using verbal descriptions, tables, graphs, and equations that simplify to the form y = mx + b. Readiness Standard	Shows linear relationships using a variety of forms.

7.7	Prerequisite Skills/Links to TEKS Vertical Alignment

Representing and Solving Algebraic Relationships

- determine if the given value(s) make(s) one-variable, one-step equations or inequalities true (6)
- model and solve one-variable, one-step equations and inequalities that represent problems, including geometric concepts (6)
- write corresponding real-world problems given one-variable, one-step equations or inequalities (6)
- represent solutions for one-variable, one-step equations and inequalities on number lines (6)
- write one-variable, one-step equations and inequalities to represent constraints or conditions within problems (6)
- represent a given situation using verbal descriptions, tables, graphs, and equations in the form y = kx or y = x + b (6)
- write an equation that represents the relationship between independent and dependent quantities from a table (6)
- identify independent and dependent quantities from tables and graphs (6)
- solve real-world problems to find the whole given a part and the percent, to find the part given the whole and the percent, and to find the percent given the part and the whole, including the use of concrete and pictorial models (6)
- represent mathematical and real-world problems involving ratios and rates using scale factors, tables, graphs, and proportions (6)
- apply qualitative and quantitative reasoning to solve prediction and comparison of real-world problems involving ratios and rates (6)
- compare two rules verbally, numerically, graphically, and symbolically in the form of y = ax or y = x + a in order to differentiate between additive and multiplicative relationships (6)
- recognize the difference between additive and multiplicative numerical patterns given in a table or graph (5)

Continued

7.7	Prerequisite Skills/Links to TEKS Vertical Alignment
	• generate a numerical pattern when given a rule in the form y = ax or y = x + a and graph (5) • represent and solve multi-step problems involving the four operations with whole numbers using equations with a letter standing for the unknown quantity (5) • represent problems using an input-output table and numerical expressions to generate a number pattern that follows a given rule representing the relationship of the values in the resulting sequence and their position in the sequence (4) • represent multi-step problems involving the four operations with whole numbers using strip diagrams and equations with a letter standing for the unknown quantity (4) • represent real-world relationships using number pairs in a table and verbal descriptions (3) • 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 (3) • represent and solve one- and two-step multiplication and division problems within 100 using arrays, strip diagrams, and equations (3) • represent one- and two-step problems involving addition and subtraction of whole numbers to 1,000 using pictorial models, number lines, and equations (3) • represent and solve addition and subtraction word problems where unknowns may be any one of the terms in the problem (2) • generate and solve problem situations for a given mathematical number sentence involving addition and subtraction of whole numbers within 1,000 (2) • 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 (1) • understand that the equal sign represents a relationship where expressions on each side of the equal sign represent the same value(s) (1) • represent word problems involving addition and subtraction of whole numbers up to 20 using concrete and pictorial models and number sentences (1) • generate and solve problem situations when given a number sentence involving addition or subtraction of numbers within 20 (1) • recognize, duplicate, extend, and create patterns (PK4.V.E.3) • recognize and duplicate patterns (PK3.V.E.3)

STAAR Reporting Category 2 – Computations and Algebraic Relationships: The student will demonstrate an understanding of how to perform operations and represent algebraic relationships.	
TEKS Knowledge and Skills Statement/ STAAR-Tested Student Expectations	STAAR Alternate 2 Essence Statement
(7.10) Expressions, equations, and relationships. The student applies mathematical process standards to use one-variable equations and inequalities to represent situations. The student is expected to: (A) write one-variable, two-step equations and inequalities to represent constraints or conditions within problems; Supporting Standard (B) represent solutions for one-variable, two-step equations and inequalities on number lines; Supporting Standard (C) write a corresponding real-world problem given a one-variable, two-step equation or inequality. Supporting Standard	Uses equations or inequalities to model real-life situations.
7.10	Prerequisite Skills/Links to TEKS Vertical Alignment
	Representing and Solving Algebraic Relationships • determine if the given value(s) make(s) one-variable, one-step equations .4025 cm 0 0 m 280 esenting a212 -1.718 Td ( )Te0 1 (aic R

7.10	Prerequisite Skills/Links to TEKS Vertical Alignment
	• compare two rules verbally, numerically, graphically, and symbolically in the form of y = ax or y = x + a in order to differentiate between additive and multiplicative relationships (6) • recognize the difference between additive and multiplicative numerical patterns given in a table or graph (5) • generate a numerical pattern when given a rule in the form y = ax or y = x + a and graph (5) • represent and solve multi-step problems involving the four operations with whole numbers using equations with a letter standing for the unknown quantity (5) • represent problems using an input-output table and numerical expressions to generate a number pattern that follows a given rule representing the relationship of the values in the resulting sequence and their position in the sequence (4) • represent multi-step problems involving the four operations with whole numbers using strip diagrams and equations with a letter standing for the unknown quantity (4) • represent real-world relationships using number pairs in a table and verbal descriptions (3) • 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 (3) • represent and solve one- and two-step multiplication and division problems within 100 using arrays, strip diagrams, and equations (3) • represent one- and two-step problems involving addition and subtraction of whole numbers to 1,000 using pictorial models, number lines, and equations (3) • represent and solve addition and subtraction word problems where unknowns may be any one of the terms in the problem (2) • generate and solve problem situations for a given mathematical number sentence involving addition and subtraction of whole numbers within 1,000 (2) • 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 (1) • understand that the equal sign represents a relationship where expressions on each side of the equal sign represent the same value(s) (1) • represent word problems involving addition and subtraction of whole numbers up to 20 using concrete and pictorial models and number sentences (1) •

Mathematics

STAAR Reporting Category 3 – Geometry and Measurement: The student will demonstrate an understanding of how to represent and apply geometry and measurement concepts.	
TEKS Knowledge and Skills Statement/ STAAR-Tested Student Expectations	STAAR Alternate 2 Essence Statement
(7.4) Proportionality. The student applies mathematical process standards to represent and solve problems involving proportional relationships. The student is expected to: (E) convert between measurement systems, including the use of proportions and the use of unit rates. Supporting Standard	Uses conversions between measurement systems to solve problems.

7.4	Prerequisite Skills/Links to TEKS Vertical Alignment

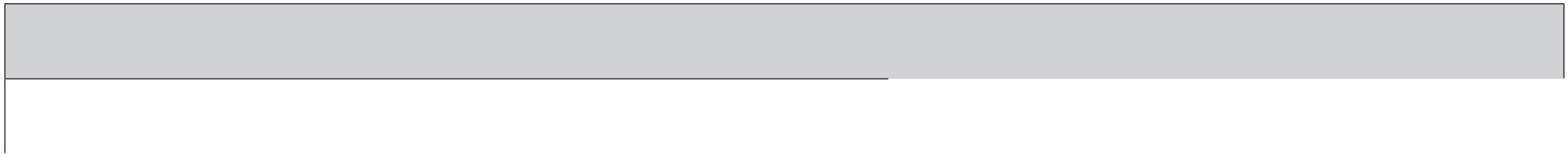
Measuring Length, Area, Volume, and Weight/Mass

- determine solutions for problems involving the area of rectangles, parallelograms, trapezoids, and triangles and volume of right rectangular prisms where dimensions are positive rational numbers (6)
- write equations that represent problems related to the area of rectangles, parallelograms, trapezoids, and triangles and volume of right rectangular prisms where dimensions are positive rational numbers (6)
- model area formulas for parallelograms, trapezoids, and triangles by decomposing and rearranging parts of these shapes (6)
- convert units within a measurement system, including the use of proportions and unit rates (6)
- solve problems by calculating conversions within a measurement system, customary or metric (5)
- determine the volume of a rectangular prism with whole number side lengths in problems related to the number of layers times the number of unit cubes in the area of the base (5)
- recognize a cube with side length of one unit as a unit cube having one cubic unit of volume and the volume of a three-dimensional gure as the number of unit cubes (n cubic units) needed to ll it with no gaps or overlaps if possible (5)
- represent and solve problems related to perimeter and/or area and related to volume (5)
- use concrete objects and pictorial models to develop the formulas for the volume of a rectangular prism, including the special form for a cube ($V = l \times w \times h$, $V = s \times s \times s$, and $V = Bh$) (5)
- solve problems that deal with measurements of length, intervals of time, liquid volumes, mass, and money using addition, subtraction, multiplication, or division as appropriate (4)
- convert measurements within the same measurement system, customary or metric, from a smaller unit into a larger unit or a larger unit into a smaller unit when given other equivalent measures represented in a table (4)
- identify relative sizes of measurement units within the customary and metric systems (4)

Continued

7.4	Prerequisite Skills/Links to TEKS Vertical Alignment
	• solve problems related to perimeter and area of rectangles where dimensions are whole numbers (4) • use models to determine the formulas for the perimeter of a rectangle (l + w + l + w or 2l + 2w), including the special form for perimeter of a square (4s) and the area of a rectangle (l × w) (4) • determine liquid volume (capacity) or weight using appropriate units and tools (3) • determine when it is appropriate to use measurements of liquid volume (capacity) or weight (3) • determine the perimeter of a polygon or a missing length when given perimeter and remaining side lengths in problems (3) • decompose two congruent two-dimensional gures into parts with equal areas and express the area of each part as a unit fraction of the whole and recognize that equal shares of identical wholes need not have the same shape (3) • decompose composite gures formed by rectangles into non-overlapping rectangles to determine the area of the original gure using the additive property of area (3) • determine the area of rectangles with whole number side lengths in problems using multiplication related to the number of rows times the number of unit squares in each row (3) • use concrete models of square units to nd the area of a rectangle by covering it with no gaps or overlaps, counting to nd the total number of square units, and describing the measurement using a number and the unit (2) • determine a solution to a problem involving length, including estimating lengths (2) • determine the length of an object to the nearest marked unit using rulers, yardsticks, meter sticks, or measuring tapes (2) • describe the inverse relationship between the size of the unit and the number of units needed to equal the length of an object (2) • nd the length of objects using concrete models for standard units of length (2) • describe a length to the nearest whole unit using a number and a unit (1) • measure the same object/distance with units of two different lengths and describe how and why the measurements differ (1) • illustrate that the length of an object is the number of same-size units of length that, when laid end-to-end with no gaps or overlaps, reach from one end of the object to the other (1) • use measuring tools to measure the length of objects to reinforce the continuous nature of linear measurement (1) • compare two objects with a common measurable attribute to see which object has more of/4gattribistID 37 15 (t(er)-1115 w,3 (abDC

7.5	Prerequisite Skills/Links to TEKS Vertical Alignment
	• classify and sort polygons with 12 or fewer sides according to attributes, including identifying the number of sides and number of vertices (2) • classify and sort three-dimensional solids, including spheres, cones, cylinders, rectangular prisms (including cubes as special rectangular prisms), and triangular prisms, based on attributes using formal geometric language (2) • create two-dimensional shapes based on given attributes, including number of sides and vertices (2) • compose two-dimensional shapes by joining two, three, or four gures to produce a target shape in more than one way if possible (1) • identify three-dimensional solids, including spheres, cones, cylinders, rectangular prisms (including cubes), and triangular prisms, and describe their attributes using formal geometric language (1) • identify two-dimensional shapes, including circles, triangles, rectangles, and squares, as special rectangles, rhombuses, and hexagons, and describe their attributes using formal geometric language (1) • create two-dimensional gures, including circles, triangles, rectangles, and squares, as special rectangles, rhombuses, and hexagons (1) • distinguish between attributes that de ne a two-dimensional or three-dimensional gure and attributes that do not de ne the shape (1) • classify and sort regular and irregular two-dimensional shapes based on attributes using informal geometric language (1) • • and hexagonsEMC /Lbl <</MCID 14 > using informal 3eometric language (1)1-1 -125



7.9	Prerequisite Skills/Links to TEKS Vertical Alignment
	• recognize a cube with side length of one unit as a unit cube having one cubic unit of volume and the volume of a three-dimensional figure as the number of unit cubes (n cubic units) needed to fill it with no gaps or overlaps if possible (5) • represent and solve problems related to perimeter and/or area and related to volume (5) • use concrete objects and pictorial models to develop the formulas for the volume of a rectangular prism, including the special form for a cube ($V = l \times w \times h$, $V = s \times s \times s$, and $V = Bh$) (5) • solve problems that deal with measurements of length, intervals of time, liquid volumes, mass, and money using addition, subtraction, multiplication, or division as appropriate (4) • convert measurements within the same measurement system, customary or metric, from a smaller unit into a larger unit or a larger unit into a smaller unit when given other equivalent measures represented in a table (4) • identify relative sizes of measurement units within the customary and metric systems (4) • solve problems related to perimeter and area of rectangles where dimensions are whole numbers (4) • use models to determine the formulas for the perimeter of a rectangle ($l + w + l + w$ or $2l + 2w$), including the special form for perimeter of a square ($4s$) and the area of a rectangle (

7.9	Prerequisite Skills/Links to TEKS Vertical Alignment
	• describe a length to the nearest whole unit using a number and a unit (1) • measure the same object/distance with units of two different lengths and describe how and why the measurements differ (1) • illustrate that the length of an object is the number of same-size units of length that, when laid end-to-end with no gaps or overlaps, reach from one end of the object to the other (1) • use measuring tools to measure the length of objects to reinforce the continuous nature of linear measurement (1) • compare two objects with a common measurable attribute to see which object has more of/less of the attribute and describe the difference (K) • give an example of a measurable attribute of a given object, including length, capacity, and weight (K) • recognize and compare weights of objects (PK4.V.D.3) • recognize and compare capacity based on how much space exists within an object (PK4.V.D.2) • recognize and compare heights or lengths of people or objects (PK4.V.D.1) • understand that weights of objects can vary and be compared (PK3.V.D.3) • begin to recognize capacity based on how much space exists within an object (PK3.V.D.2) • understand that lengths of objects can vary and be compared (PK3.V.D.1)

STAAR Reporting Category 3 – Geometry and Measurement: The student will demonstrate an understanding of how to represent and apply geometry and measurement concepts.	
TEKS Knowledge and Skills Statement/ STAAR-Tested Student Expectations	STAAR Alternate 2 Essence Statement
(7.11) Expressions, equations, and relationships. The student applies mathematical process standards to solve one-variable equations and inequalities. The student is expected to: (C) write and solve equations using geometry concepts, including the sum of the angles in a triangle, and angle relationships. Supporting Standard	Identi es or solves equations using geometry concepts.

7.11	Prerequisite Skills/Links to TEKS Vertical Alignment
	Measuring Angles and Using Angle Relationships • extend previous knowledge of triangles and their properties to include the sum of angles of a triangle, the relationship between the lengths of sides and measures of angles in a triangle, and determining when three lengths form a triangle (6) • determine the measure of an unknown angle formed by two non-overlapping adjacent angles given one or both angle measures (4) • draw an angle with a given measure (4) • determine the approximate measures of angles in degrees to the nearest whole number using a protractor (4) • illustrate degrees as the units used to measure an angle, where 1/360 of any circle is one degree and an angle that “cuts” n/360 out of any circle whose center is at the angle’s vertex has a measure of n degrees. Angle measures are limited to whole numbers (4) • illustrate the measure of an angle as the part of a circle whose center is at the vertex of the angle that is “cut out” by the rays of the angle. Angle measures are limited to whole numbers (4) Measuring Length, Area, Volume, and Weight/Mass • determine solutions for problems involving the area of rectangles, parallelograms, trapezoids, and triangles and volume of right rectangular prisms where dimensions are positive rational numbers (6) • write equations that represent problems related to the area of rectangles, parallelograms, trapezoids, and triangles and

Mathematics

7.11	Prerequisite Skills/Links to TEKS Vertical Alignment
	• understand that the equal sign represents a relationship where expressions on each side of the equal sign represent the same value(s) (1) • represent word problems involving addition and subtraction of whole numbers up to 20 using concrete and pictorial models and number sentences (1) • generate and solve problem situations when given a number sentence involving addition or subtraction of numbers within 20 (1) • recognize, duplicate, extend, and create patterns (PK4.V.E.3) • recognize and duplicate patterns (PK3.V.E.3)

Mathematics

7.6	Prerequisite Skills/Links to TEKS Vertical Alignment
	• give examples of rates as the comparison by division of two quantities having different attributes, including rates as quotients (6) • give examples of ratios as multiplicative comparisons of two quantities describing the same attribute (6) • extend representations for division to include fraction notation such as a/b represents the same number as a ÷ b where b 0 (6) • compare two fractions with different numerators and different denominators and represent the comparison using the symbols >, =, or < (4) • determine if two given fractions are equivalent using a variety of methods (4) • 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 (4) • 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 (4) • relate decimals to fractions that name tenths and hundredths (4) • represent decimals, including tenths and hundredths, using concrete and visual models and money (4) • 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 (3) • represent equivalent fractions with denominators of 2, 3, 4, 6, and 8 using a variety of objects and pictorial models, including number lines (3) • 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 (3) • 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 (3) • 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 (3) • 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 (3) • identify examples and non-examples of halves, fourths, and eighths (2) • use concrete models to count fractional parts beyond one whole using words and recognize how many parts it takes to equal one whole (2) • explain that the more fractional parts used to make a whole, the smaller the part: the fewer the fractional parts, the larger the part (2) • partition objects into equal parts and name the parts, including halves, fourths, and eighths, using words (2) • identify examples and non-examples of halves and fourths (1) • partition two-dimensional gures into two and four fair shares or equal parts and describe the parts using words (1)

7.13	Prerequisite Skills/Links to TEKS Vertical Alignment
	• explain the difference between gross income and net income (5) • de ne income tax, payroll tax, sales tax, and property tax (5) • distinguish between xed and variable expenses (4) • explain the connection between human capital/labor and income (3) • identify income as a means of obtaining goods and services, oftentimes making choices between wants and needs (1) • de ne money earned as income (1) •

7.13	Prerequisite Skills/Links to TEKS Vertical Alignment
	• list reasons to save and explain the bene t of a savings plan, including for college (3) • explain that credit is used when wants or needs exceed the ability to pay and that it is the borrower's responsibility to pay it back to the lender, usually with interest (3) • identify the costs and bene ts of planned and unplanned spending decisions (3) • describe the relationship between the availability or scarcity of resources and how that impacts cost (3) •

Mathematical Process Standards – Mathematical process standards will not be listed under a separate reporting category. Instead, they will be incorporated into test questions across reporting categories since the application of mathematical process standards is part of each knowledge statement.
TEKS Knowledge and Skills Statement/ STAAR-Tested Student Expectations
(7.1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: (A) apply mathematics to problems arising in everyday life, society, and the workplace; (B) use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution; (C) select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques,