ACE | Dallas ISD Accelerating Campus Excellence

GRADE 4 MATHEMATICS FIRST SIX WEEKS INSTRUCTIONAL CALENDAR

OVERVIEW

Week		Focus	Student Expectations
1	Aug 19 – 23, 2019	Place Value & Whole Number Comparison	4.2A, 4.2B, 4.2C
2	Aug 26 – 30, 2019	Decimal Representations & Place Value	4.2B, 4.2C, 4.2E, 4.2F, 4.2H, 4.3G
3	Sept 2 – 6, 2019	Decimal Place Value; Addition & Subtraction of Whole Numbers with Estimation	4.2B, 4.2D, 4.4A, 4.4G
4	Sept 9 – 13, 2019	Addition & Subtraction of Whole Numbers with Estimation; Determining Profit; Multiplication Patterns & Algorithms	4.4A, 4.4B, 4.4D, 4.4G, 4.10B, 4.10E
5	Sept 16 – 20, 2019	Problem Solving with Multiplication Representations and Algorithms	4.4C, 4.4D, 4.4G, 4.4H
6	Sept 23 – 27, 2010	Problem Solving Representations and Algorithms (Single/Multiple Operations)	4.4H, 4.5A

ASSESSMENT FREQUENCY

Student Expectation	1st Six Weeks Common Assessment	2nd Six Weeks Common Assessment	Assessment of Course Performance (ACP)	4TH Six Weeks Common Assessment
4.2A				
4.2B	X	X	X	
4.2C	X			
4.2D	X			
4.2E	X			
4.2F	X			
4.2H	X		X	
4.3G				
4.4A	X	X	X	
4.4B				
4.4C	X			
4.4D	X		X	
4.4G		X	X	
4.4H		X	X	
4.5A		X	X	
4.10B			X	
4.10E	X			

August 19 – 23, 2019

Week 1	Monday	Tuesday	Wednesday	Thursday	Friday
Readiness Standards	Establish classroom behavioral routines and procedures Introduce the Routine *Number of the Day*	**4.2B** represent the value of the digit in whole numbers through 100,000 ~~1,000,000,000 and decimals to the hundredths~~ using expanded notation and numerals	**4.2B** represent the value of the digit in whole numbers through 1,000,000 ~~1,000,000,000 and decimals to the hundredths~~ using expanded notation and numerals	**4.2B** represent the value of the digit in whole numbers through 1,000,000,000 ~~and decimals to the hundredths~~ using expanded notation and numerals	
Supporting Standards		**4.2A** 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~~	**4.2A** 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	**4.2A** 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	**4.2C** compare and order whole numbers to 100,000 ~~1,000,000,000~~ and represent comparisons using the symbols >, =, or <
Standard Trajectory		Representations: Concrete/Pictorial – Base-10 Blocks (4.2A); Abstract – Expanded Notation (SE4.2B), Comparison Symbols (4.2C)			
		The magnitude of the numbers associated with student expectations **4.2B** and **4.2C** require the standard be taught at the abstract level. However conceptual development of student expectation **4.2A** requires the use of concrete/pictorial models. Base-10 blocks can be displayed to represent 300, 30, and 3. Ten groups each with the amounts of 30 and 3 can be constructed to show the relationship of comparing a digit's value as it moves to the right in the place value system. The amounts can be displayed and discussed to show a fractional relationship using the same 10 groupings. Repeated addition can also be used to represent the multiplicative relationship. Rote memorization of the concept is abstract and requires conceptual development first.			
Process Standards		**4.1A** apply mathematics to problems arising in everyday life, society, and the workplace **4.1C** select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems **4.1D** communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate **4.1E** create and use representations to organize, record, and communicate mathematical ideas **4.1F** analyze mathematical relationships to connect and communicate mathematical ideas **4.1G** display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication			

Learning Objective / Demonstration of Learning	Establish classroom behavioral routines and procedures Introduce the Routine Number of the Day				
Routines		*Number of the Day* – Aspects of student expectations **4.2B**, **4.2C**, **4.2D**, mental math and number sense are continuously reinforced through the implementation of the routine. **SE 4.2A** can be supported through questions about the difference in values of like digits. It is not necessary to complete the entire template. Focus can be placed on segments that reinforce current student expectations.			
Preview Challenge Suggestions		Taylor scored 57,344 points on an arcade game. He wrote the number of points in expanded notation. Write 57,344 in expanded notation.	Kasey determined Habitat for Humanity has used 1,873,550 nails building houses across North Texas. Write the number of nails in expanded form.	Kasey compared the value of the two fives in 1,873,550 and wrote two statements about how their values are related. What might Kasey have written?	Mr. Baker earns between 50,000 and 60,000 dollars a year. Mrs. Baker earns $53,500 a year. Determine Mr. Baker's earnings. Use two different symbols to compare Mr. & Mrs. Bakers' earnings.
Guiding Questions		**SE 4.2A** • What digits make up the base-10 place value system? What pattern is repeated throughout our system of numbers? • What relationships can be found in the base-10 place value system? • How is the value of a digit within a number determined? • How is the value of a number determined using the position of the digits? • How does the place value change when moving to the left across the place value positions in a number? • What is the difference between a ___ in the hundreds column and the same digit in the one-thousand column? • What does it mean if a digit/number is 10 times greater than another digit/number? • How does the place value change when moving to the right across the place value positions in a number? • What is the difference between a ___ in the hundreds column and the same digit in the tens column? • What does it mean if a digit/number is $\frac{1}{10}$ the size of another than another digit/number?			

Guiding Questions

SE 4.2B
- What are some ways a number can be represented?
- What is the difference between expanded form and expanded notation?
- What pattern is repeated when expressing a number in expanded notation?
- Why can a number vary in representation but the value of the number stay the same?

SE 4.2C
- How can a number line be used to compare and order two numbers?
- How is place value used to compare and order two numbers?
- How can the comparison of two numbers be described and represented with symbols?

Instructional Supports

- Quality Work Criteria chart
- 1st Six Weeks CA Exemplars
- **Manipulatives:** Base-10 blocks**,** money
- **Strategy Focus:** Drawing the Place Value Chart

- **Anchor Charts:** Number of the Day; Place Value Chart; Expanded Notation
- **Textbook:** HMH GOMath! Unit 1, Module 1, Lessons 1.1 & 1.2

- **Strategy Focus:** Whole Number Comparison
- **Anchor Charts:** Number of the Day; Place Value Chart; Comparison Symbols; Open Number Lines
- **Textbook: Textbook:** HMH GOMath! Unit 1, Module 1, Lesson 1.3

STAAR Stems

SE 4.2A 2018

13 A stadium sold 33,300 tickets to a concert. Which statement about this number is true?

A The value of the digit in the tens place is 10 times the value of the digit in the hundreds place.

B The value of the digit in the thousands place is $\frac{1}{10}$ the value of the digit in the ten thousands place.

C The value of the digit in the hundreds place is 10 times the value of the digit in the thousands place.

D The value of the digit in the ten thousands place is $\frac{1}{10}$ the value of the digit in the hundreds place.

STAAR Stems

1 In the number shown, one digit is underlined and one digit is circled.

$$\underline{7}\textcircled{7},000$$

SE 4.2A 2015

Which statement about the circled digit is true?

A Its value is 10 times greater than the value of the underlined digit.

B Its value is $\frac{1}{10}$ the value of the underlined digit.

C Its value is 70 times the value of the underlined digit.

D Its value is $\frac{1}{70}$ the value of the underlined digit.

2 Rita bought three and forty-eight hundredths pounds of bananas at the store. How is this number written in expanded notation?

F $(3 \times 1) + (4 \times 0.1) + (8 \times 0.01)$

G $(3 \times 100) + (4 \times 10) + (8 \times 1)$

H $(3 \times 1) + (4 \times 0.01) + (8 \times 0.1)$

J $(3 \times 100) + (4 \times 0.1) + (8 \times 0.01)$

SE 4.2B 2018

20 The counter shows the number of times a website has been visited.

Counter

0	0	0	,	7	2	4	,	3	5	6

What is the value of the digit 4 in this number?

F 400

G 40

H 4

J Not here

SE 4.2B 2018

STAAR Stems

3 Quinlyn described a number using these clues.

- The value of the digit 7 is (7×10).
- The value of the digit 3 is $(3 \times 1{,}000)$.
- The value of the digit 1 is (1×100).

Which number could fit Quinlyn's description?

A 3,175.02

B 93,075.01

C 3,651.70

D 9,372.01

SE 4.2B 2017

27 The number 47.06 can be expressed as —

A $(4 \times 10) + (7 \times 1) + (6 \times 0.01)$

B $(4 \times 10) + (7 \times 1) + (6 \times 0.1)$

C $(4 \times 1) + (7 \times 1) + (0 \times 1) + (6 \times 1)$

D $(4 \times 10) + (7 \times 1) + (0 \times 10) + (6 \times 100)$

SE 4.2B 2017

9 The table below shows the length of the railway network in each of five countries.

Railway Networks

Country	Length of Railway (meters)
Brazil	28,538,000
France	29,640,000
Italy	20,255,000
Japan	27,182,000
South Africa	20,192,000

Which list shows these countries in order from shortest to longest railway network?

A France, Brazil, Japan, Italy, South Africa

B South Africa, Italy, Japan, Brazil, France

C France, South Africa, Italy, Japan, Brazil

D South Africa, Italy, Japan, France, Brazil

SE 4.2C 2017

30 The weights of four hippos at a zoo are listed.

- Hippo W: 3,894 lb
- Hippo X: 3,648 lb
- Hippo Y: 3,699 lb
- Hippo Z: 3,806 lb

If the hippos are listed in order from least weight to greatest weight, which hippo would come third in the list?

F Hippo W, because $3{,}806 < 3{,}648 < 3{,}894 < 3{,}699$

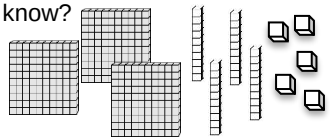
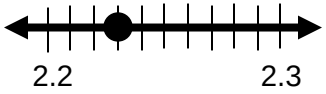
G Hippo X, because $3{,}806 < 3{,}894 < 3{,}648 < 3{,}699$

H Hippo Y, because $3{,}894 < 3{,}648 < 3{,}699 < 3{,}806$

J Hippo Z, because $3{,}648 < 3{,}699 < 3{,}806 < 3{,}894$

SE 4.2C 2016

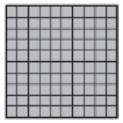
Week 2	Monday	Tuesday	Wednesday	Thursday	Friday
Readiness Standards					**4.2B** represent the value of the digit in whole numbers through 1,000,000,000 and decimals to the hundredths using expanded notation and numerals
Supporting Standards	**4.2C** compare and order whole numbers to 1,000,000,000 and represent comparisons using the symbols >, =, or <	**4.2E** represent decimals, including tenths and hundredths, using concrete and visual models and money **4.2F** compare and order decimals using concrete and visual models to the hundredths **4.2H** determine the corresponding decimal to the tenths or hundredths place of a specified point on a number line **4.3G** represent fractions and decimals to the tenths or hundredths as distances from zero on a number line			
Standard Trajectory	Representations: Abstract – Comparison Symbols	Representations: Concrete/Pictorial – Base-10 Blocks, Money, Number Line			Representations: Abstract – Expanded Notation
	• See Week 1 for **SE 4.2C** Standard Trajectory. • Student expectations **4.2E** and **4.2F** are taught at the concrete and pictorial levels. Use base-10 blocks to represent decimal amounts after the whole number 1 has been established as either the thousands cube or the hundred flat. Representation of decimal numbers should be practiced with the representation of 1 taking either form. Breaking the whole number 1 into tenths and then hundredths continues to support **SE 4.2A** and the idea of the place value to the right as $\frac{1}{10}$ of the previous place value. Concrete representations will also support **SE 4.2B** that begins to focus on expanded notation of decimals. • Student expectations **4.2H** and **4.3G** are pictorial in orientation. These standards take numerous practice sessions to master and can be supported using the number lines displayed on the bottom of the Number/Decimal of the Day routine. The number lines can be used to represent different decimal numbers; the process of rounding is not implemented.				
Process Standards	**4.1A** apply mathematics to problems arising in everyday life, society, and the workplace **4.1C** select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems **4.1D** communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate **4.1E** create and use representations to organize, record, and communicate mathematical ideas **4.1F** analyze mathematical relationships to connect and communicate mathematical ideas **4.1G** display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication				

Learning Objective / Demonstration of Learning					
Routines	*Decimal of the Day* – Aspects of student expectations **4.2B**, **4.2E**, **4.2F**, **4.2G**, **4.2H**, and **4.4A** (through mental math) are continuously reinforced through the implementation of the routine. **SE 4.2A** can be supported through questions about the difference in values of like digits. It is not necessary to complete the entire template. Focus can be placed on segments that reinforce concepts and skills students continue to find challenging.				
Preview Challenge Suggestions	Ms. Wilson won $2,583,819 in the lottery. She will use some of the money to buy a new house. Determine how much Ms. Wilson will spend on her new house. Compare the lottery winnings and the cost of the house. Write two comparisons using symbols.	You have $5.37 in your pocket. Draw two representations for this amount using money and base-10 blocks.	You have $5.37 in your pocket. Your friend has the amount shown. How much money does your friend have? Who has more? How do you know? 	Your friend claims the number line shows the number 2.30. Do you agree or disagree? Why? 	Blair wrote the expanded notation for 23.08 as shown. Do you agree or disagree with Blair's representation? Why or why not? (1 x 20) + (3 x 1) + (8 x 0.1)
Guiding Questions	**SE 4.2B (Decimals)** • How does the value of a digit change when moving from the ones place to the tenths place to the hundredths place? • How does the value of a digit change when moving from the hundredths place to the tenths place to the ones place? • What is the role of the decimal point in a number? • How does representing a decimal differ from representing a whole number in expanded notation? **SE 4.2E** • Why must the number one be determined before representing a decimal with base-10 blocks? • How are decimal numbers represented with concrete and visual models? • What currency is used when representing decimal amounts with money? **SE 4.2F** • How is comparing and ordering decimal numbers like/different than comparing and ordering whole numbers? • What role does a whole number play when ordering decimals (i.e. 2.2 compared to 3.2)? • When and how are tenths and hundredths interchangeable when creating decimal models? • Is it always true that a tenth is greater than a hundredth? Why or why not?				

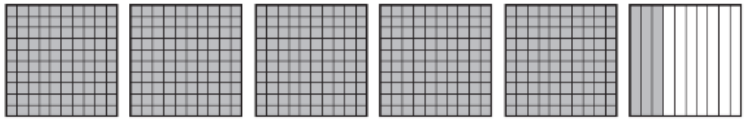
<table>
<tr><td>Guiding Questions</td><td colspan="4">SE 4.2H & SE 4.3G
• How does the unit length determine the scale of the number line?
• How many points are between any two points on a number line?
• How many tenths or hundredths fall between any two consecutive whole numbers on a number line?
• How do locations of points on a number line indicate their relative magnitude in relation to zero or other points on the number line?
• How can the value of a specified point on a number line be determined?
• How is determining the value of a specified point on a number line for a decimal the same/different than finding the value of a whole number?</td></tr>
<tr><td rowspan="3">Instructional Supports</td><td colspan="4">• Quality Work Criteria chart
• 1st Six Weeks CA Exemplars
• Anchor Chart: Decimal of the Day</td></tr>
<tr><td></td><td>• Manipulative: Dollars, Dimes & Pennies</td><td>• Manipulative: Base-10 Blocks</td><td>• Manipulative: Number Lines</td><td>• Manipulative: Base-10 Blocks</td></tr>
<tr><td>• Strategy Focus: Whole Number Comparison
• Anchor Charts: Number of the Day; Place Value Chart; Comparison Symbols; Open Number Lines
Textbook: Textbook: HMH GOMath! Unit 1, Module 1, Lesson 1.3</td><td colspan="2">• Strategy: Decimal Representations (Concrete & Pictorial)
• Anchor Charts: Decimal of the Day; Decimal Representations
• Textbook: HMH GOMath! Unit 1, Module 2, Lessons 2.3 – 2.7</td><td>• Anchor Charts: Expanded Notation w/Decimals
• Textbook: HMH GOMath! Unit 1, Module 2, Lessons 2.1 & 2.2</td></tr>
<tr><td>STAAR Stems</td><td colspan="4">See Week 2 for STAAR Stems that assess SE 4.2B & SE 4.2C.</td></tr>
</table>

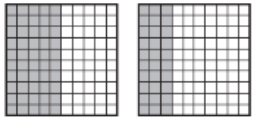
STAAR Stems

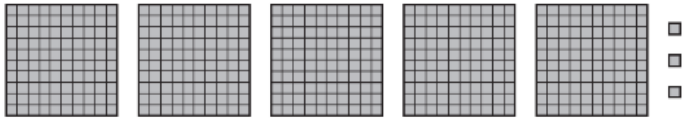
5 This model is shaded to represent 1 whole.

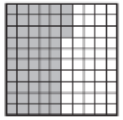


Zack drew a model that was shaded to represent 0.53. Which model could Zack have drawn?

A 

B 

C 

D 

SE 4.2E 2018

SE 4.2E 2016

31 Each picture below represents a different amount of money. In which amount of money does the digit 8 represent eight cents?

A

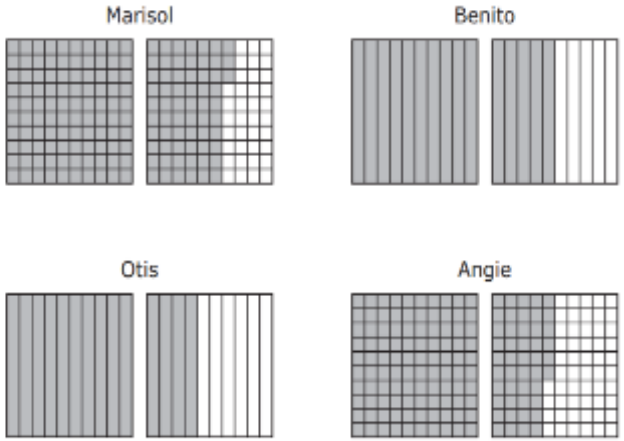
B

C

D

STAAR Stems

27 The distances in meters that four students jumped are modeled below.



Which list shows these distances in order from greatest to least?

A 1.46 m 1.5 m 1.4 m 1.63 m

B 1.63 m 1.46 m 1.5 m 1.4 m

C 1.4 m 1.46 m 1.5 m 1.63 m

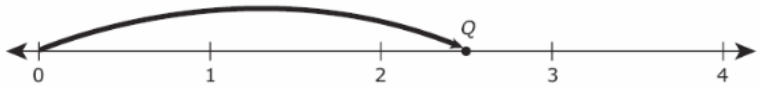
D 1.63 m 1.5 m 1.46 m 1.4 m

SE 4.2F 2016

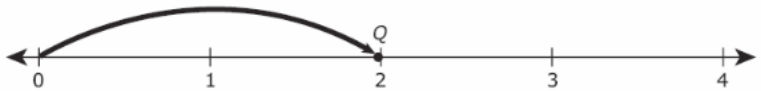
12 On which number line does point *Q* best represent a distance of 2.98 units from zero?

F

G



H



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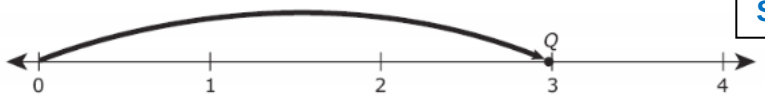
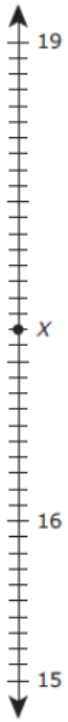


SE 4.3G 2017

48 Point *X* on the number line below represents the height of a puppy in centimeters.



SE 4.2H 2016

What measurement does point *X* represent on the number line?

F 16.12 cm

G 17.2 cm

H 18.8 cm

J 17.8 cm

Week 3	Monday	Tuesday	Wednesday	Thursday	Friday
Readiness Standards	Student/Staff Holiday	**4.2B** represent the value of the digit in whole numbers through 1,000,000,000 and decimals to the hundredths using expanded notation and numerals			**4.4A** add and subtract whole numbers ~~and decimals to the hundredths place~~ using the standard algorithm
Supporting Standards			**4.2D** round whole numbers to a given place value through the hundred thousands place		**4.4G** round to the nearest 10, 100, or 1,000 or use compatible numbers to estimate solutions involving whole numbers
Standard Trajectory		Representations: Abstract – expanded notation	Representations: Pictorial – Number Lines; Abstract - Algorithm		Representations: Pictorial – Number Line, Strip Diagram; Abstract - Algorithm
		• **SE 4.2B** is taught at the abstract level; however, base-10 blocks can be infused into the lesson to provide concrete representations of decimals. • **SE 4.2D** is taught at the abstract level because it is assumed students understand the magnitude of number through the conceptual development of rounding using number lines in grade 3. Refrain from using mnemonic devices and chants as substitutes for understanding the concept of rounding based on mid-point recognition and magnitude on a number line. • **SE 4.4A** and **SE 4.4G** are taught at the abstract level through algorithms; however, the Problem-Solving Protocol requires a pictorial representation be included in the student's solution path. The inclusion of compatible numbers in **SE 4.4G** implies students understand benchmark numbers (i.e. 25, 50, 75) and intervals of 10, 100, 1,000, etc. that are compatible. The Problem-Solving Protocol supports rounding and estimation as a viable step when solving one-step word problems.			
Process Standards		**4.1A** apply mathematics to problems arising in everyday life, society, and the workplace **4.1B** 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 **4.1C** select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems **4.1E** create and use representations to organize, record, and communicate mathematical ideas **4.1F** analyze mathematical relationships to connect and communicate mathematical ideas **4.1G** display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication			

Learning Objective / Demonstration of Learning	Student/Staff Holiday				
Routines		*Decimal of the Day* – Continue to reinforce decimal concepts.	*Problem-Solving Protocol* – Select a problem to introduce the PSP. Use the time devoted to routines to segment and explain the protocol for students. As an exemplar is created students also replicate and create an exemplar for reference when solving problems in the future.		
Preview Challenge Suggestions		Serena always writes a decimal number in a place value chart before she represents it with expanded notation. Hendrix always writes a decimal number in expanded form before he represents the number in expanded notation. Which strategy do you prefer? Why?	At the mayor's back to school fair, 8,432 pencils were distributed. Show on a number line why 8,432 rounded to the nearest hundred is 8,400.	The average attendance at an NFL football game in 2017 was 69,264. Round 69,264 to the nearest ten, hundred, thousand, ten-thousand and hundred thousand.	Aaron estimated the total of 435 and 774 as 1,300. Others in his class estimated the total as 1,200. Aaron's estimate is closest to the actual sum. Aaron said he used compatible numbers. Show and explain how Aaron may have estimated.
Guiding Questions		**SE 4.2D** • How is place value used to round a number to the nearest 10; 100; or 1,000? • What are the mid-points for 10, 100, 1,000, 10,000, and 100,000? • What role does the mid-point play when rounding to the nearest 10; 100; 1,000; 10,000 or 100,000? • How is rounding 342 to the nearest 100 the same/different than rounding 13,342 to the nearest 100? What rule or generalization can be made about the process of rounding when numbers are alike, like these? • How does rounding a number change its value relative to the original number? **SE 4.4A** • Why are place value positions so important when adding or subtracting? • Why is zero called a place holder? • What is the greatest digit that can occupy a place value position? Why? • What does regrouping mean when you are adding? When you are subtracting? • What other algorithm can you use to check your computation?			

<table>
<tr><td rowspan="2">Guiding Questions</td><td rowspan="3">Student/Staff Holiday</td><td colspan="3">SE 4.4G
• What is the purpose of estimating a solution?
• What are the mid-points for 10, 100, 1,000, 10,000, and 100,000?
• What strategies can be used to estimate a solution?
• How does rounding numbers up impact the relationship between the estimate and the actual sum/difference?
• How does rounding numbers down impact the relationship between the estimate and the actual sum/difference?</td></tr>
<tr><td rowspan="2">Instructional Supports</td><td colspan="3">• Quality Work Criteria chart
• 1st Six Weeks CA Exemplars</td></tr>
<tr><td>• Anchor Charts: Expanded Notation w/Decimals
• Textbook: HMH GOMath! Unit 1, Module 2, Lessons 2.1 & 2.2</td><td>• Strategy: Rounding Conceptually
• Anchor Charts: One-Step Problem-Solving Protocol for Addition & Subtraction; Rounding Numbers
• Textbook: HMH GOMath! Unit 1, Module 1, Lesson 1.4</td><td>• Strategies: Problem-Solving Protocol
• Anchor Charts: One-Step Problem-Solving Protocol for Addition & Subtraction; Rounding Numbers
• Textbook: HMH GOMath! Unit 2, Module 6, Lessons 6.1 – 6.3</td></tr>
<tr><td>STAAR Stems</td><td colspan="4">7 Scott traveled 557 miles to visit his cousin. What is this number rounded to the nearest ten?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

SE 4.2D 2017</td></tr>
</table>

STAAR Stems

3 Hannah drew straight lines on her driveway with chalk. The table shows the lengths of the lines.

Hannah's Chalk Lines

Line	Length (meters)
P	1.8
Q	4.05
R	7
S	7.75

What is the difference in meters between the length of Line S and the length of Line P?

A 7.57 m

B 5.95 m

C 3.70 m

D 6.15 m

SE 4.4A 2018

24 Sandy purchased two patio chairs that cost $57.65 each and a table that cost $146.22. What is the total cost of these items?

F $203.87

G $350.09

H $140.42

J $261.52

SE 4.4A 2018

21 Kristine has a $10 bill to spend at a book fair. She buys one book for $4.95, two bookmarks for $0.65 each, and a key chain for $1.85.

How much change should Kristine receive from her $10 bill?

A $2.55

B $2.10

C $3.45

D $1.90

SE 4.4A 2017

STAAR Stems

15 The list shows the number of trees Isaiah planted in three years.

- He planted 521 trees in the first year.
- He planted 387 trees in the second year.
- He planted 438 trees in the third year.

Isaiah wants to plant a total of 2,000 trees. How many more trees does Isaiah need to plant?

A 654

B 1,346

C 874

D 764

SE 4.4A 2016

34 Jana bought 1 hat and 2 skirts. The hat cost $28.53, and the skirts cost $15.88 each. What was the total cost in dollars and cents of the items Jana bought?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

SE 4.4A 2016

24 The table shows the number of cartons of milk the school cafeteria sold each day last week.

Milk

Day	Number of Cartons Sold
Monday	352
Tuesday	426
Wednesday	449
Thursday	373
Friday	402

SE 4.4G 2017

Which of these is the best estimate of the number of cartons of milk the cafeteria sold last week?

F 400

G 1,800

H 2,000

J 2,500

32 Jorge swam a total of 173 minutes during 3 days. He swam the same number of minutes each day. Which of the following is the best estimate of the number of minutes Jorge swam each day?

F 60

G 40

H 20

J 30

SE 4.4G 2016

Week 4	Monday	Tuesday	Wednesday	Thursday	Friday
Readiness Standards	**4.4A** add and subtract whole numbers ~~and decimals to the hundredths place~~ using the standard algorithm	**4.4A** add and subtract whole numbers and decimals to the hundredths place using the standard algorithm			
Supporting Standards	**4.4G** round to the nearest 10, 100, or 1,000 or use compatible numbers to estimate solutions involving whole numbers	**4.10B** calculate profit in a given situation **4.10E** describe the basic purpose of financial institutions, including keeping money safe, borrowing money, and lending			**4.4B** determine products of a number and 10 or 100 using properties of operations and place value understandings **4.4D** 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…distributive properties~~
Standard Trajectory	Representations: Concrete – Money, Base-10 Blocks; Pictorial – Number Line, Strip Diagram; Abstract – Algorithms				
	• See Week 3 for **SE 4.4A** and **SE 4.4G** Standard Trajectory. • Student expectations **4.10B** and **410E** are taught at the abstract level. Because of the vocabulary associated with calculating profit, it is recommended that concrete artifacts, money, and role play be used to simulate sale situations. Students need to understand when a profit situation will and will not occur. • Student expectations **4.4B** and **4.4D** are taught at the abstract level. **SE 4.4B** is usually taught through the application of a pattern of zeros. A connection can be made to **SE 4.2A** (first week of instruction) by using base-ten blocks to demonstrate how 10 groups of three equal 30; how 10 groups of 20 equal 200, etc. Forming a generalization after exploring numerous examples of concrete and pictorial representations leads to the application of attaching zeros to factors multiplied by 10 and/or 100.				
Process Standards	**4.1A** apply mathematics to problems arising in everyday life, society, and the workplace **4.1B** 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 **4.1C** select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems **4.1E** create and use representations to organize, record, and communicate mathematical ideas **4.1F** analyze mathematical relationships to connect and communicate mathematical ideas **4.1G** display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication				

Learning Objective / Demonstration of Learning					
Routines	*Number of the Day/Decimal of the Day* – Focus on whole number or decimal concepts based on student performance data.				
Preview Challenge Suggestions	Alvin raised $4,328 for St. Jude's Children's Hospital this year. Last year, Alvin raised $2,575 for the hospital. Alvin estimated he raised $1,700 more this year than last year. How did Alvin determine his estimate?	Your brother gives you a soccer ball. You sell the soccer ball to a friend for $2. Did you make a profit? Why or why not?	For a school fundraiser, the second-grade teachers bought a jar of pickles for $15.75. They sold all of the pickles for $27.50. How much did the teachers earn in profit?	List all of the services a bank can provide its customers.	Chris knows he can represent multiplication using a number line, base-10 blocks, and arrays. Show two different ways to represent 345 x 4.
Guiding Questions	**SE 4.4A** (Decimals) • What are the endpoints on a number line when rounding a two-digit number? A three-digit number? • What is a midpoint? Why is a midpoint important when rounding a number? • If the number you are rounding is a midpoint, what standard rule is used for determining the number rounded?				

<table>
<tr><td>Guiding Questions</td><td colspan="3">SE 4.4B
• How do place value positions shift when numbers become 10 times larger or 100 times larger?
• What pattern occurs when multiplying numbers by 10? By 100?
• How do the distributive and commutative properties of multiplication make mental multiplication by 10 and 100 possible?
SE 4.4D
• What generalization can be made about the product of a number multiplied by 0? By 1? By 2?
• What generalization can be made about the product of two counting numbers greater than one?
• What does it mean to double or triple an amount?
SE 4.10B
• What is the process for calculating profit in a situation?
• How is profit affected when expenses increase/decrease and income does not increase?
• How is profit affected when expenses remain the same and income is increased/decreased?
• When will a sale result in no profit being made?
SE 4.10E
• What do banks do with money that is deposited?
• Who are the customers that banks serve? What are some examples of depositors and borrowers?
• Who is the lender of money? Who is the borrower? What is the relationship between lending and borrowing money?
• What is a loan? What is interest?</td></tr>
<tr><td rowspan="2">Instructional Supports</td><td colspan="3">• Quality Work Criteria chart
• 1st Six Weeks CA Exemplars
• Strategy Focus: Problem-Solving Protocol; Problem-Solving Think Aloud
• Anchor Charts: Problem-Solving Think Aloud, Open Number Lines, Strip Diagrams, Running Totals</td></tr>
<tr><td>• Strategies: Problem-Solving Protocol; Rounding Numbers
• Anchor Charts: Problem-Solving Protocol (Addition & Subtraction); Rounding Numbers
• Textbook: HMH GOMath! Unit 2, Module 6, Lessons 6.1 – 6.3</td><td>• Strategies: Problem-Solving Protocol
• Anchor Charts: Calculating Profit; Banking Practices
• Textbook: HMH GOMath! Unit 2, Module 6, Lessons 6.4 & 6.5; Unit 6, Module 18, Lessons 18.2 & 18.5</td><td>• Strategies: Multiplying by Multiples of 10 & 100; Area Model for Multiplication
• Anchor Charts: Multiplying by Multiples of 10 &100
• Textbook: HMH GOMath! Unit 2, Module 7, Lessons 7.1 & 7.3</td></tr>
</table>

STAAR Stems

See Week 3 for STAAR Stems that assess **SE 4.4A** & **SE 4.4G**.

34 Ms. Gonzales packs 45 boxes with limes. Each box holds 100 limes. How many limes can Ms. Gonzales pack into these boxes?

F 4,005

G 450

H 145

J 4,500

SE 4.4B 2017

4 There are 27 teams in a hockey league. There are 16 players on each team. How many players are in the hockey league?

F 162

G 189

H 432

J Not here

SE 4.4D 2017

7 A basketball team plays 82 games each year. How many games will the team play in 25 years?

A 1,050

B 2,040

C 2,090

D 2,050

SE 4.4D 2016

SE 4.4B 2016

5 A number sentence is shown below.

◇ × 10 = ○

Which table shows numbers that make the number sentence true?

A

◇	○
44	54
66	76
99	109
150	160

C

◇	○
44	4,400
66	6,600
99	9,900
150	15,000

B

◇	○
44	440
66	660
99	990
150	1,500

D

◇	○
44	404
66	606
99	909
150	1,050

STAAR Stems

13 Zoey sold snacks at a neighborhood pool. The cost of preparing the snacks was $10.29. The money she received from the sale of the snacks was $21.75.

What was Zoey's profit?

A $32.04

B $21.75

C $11.46

D $10.29

SE 4.10B 2017

25 Gwen bought an old table. She repaired it and painted it so that it looked new. Then she sold the table. Gwen made this list about what she did.

- Price paid for old table: $10.00
- Cost to repair: $5.00
- Cost to paint: $7.50
- Selling price: $50.00

SE 4.10B 2016

What was Gwen's profit from selling the table?

A $27.50

B $50.00

C $22.50

D $40.00

23 Which of these services is **not** provided by a financial institution such as a bank or credit union?

A Informing customers of the amount of money in their accounts

B Informing customers of how the money in their accounts must be spent

C Providing cash when customers make withdrawals from their accounts

D Providing loans to customers that can be paid back over time with interest

SE 4.10E 2015

September 16 – 20, 2019

Week 5	Monday	Tuesday	Wednesday	Thursday	Friday
Readiness Standards	**4.4H** solve with fluency one-~~and two-~~step problems involving multiplication ~~and division, including interpreting remainders~~			**4.4H** solve with fluency one- ~~and two-~~step problems involving multiplication ~~and division, including interpreting remainders~~	
Supporting Standards	**4.4D** 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…distributive properties~~	**4.4C** represent the product of 2 two-digit numbers using arrays, area models, or equations, including perfect squares through 15 by 15 **4.4D** 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…distributive properties		**4.4D** 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…distributive properties **4.4G** round to the nearest 10, ~~100, or 1,000 or use compatible numbers~~ to estimate solutions involving whole numbers	
Standard Trajectory	Representations: Pictorial – Strip Diagram, Number Line, Arrays, Area Models; Abstract – Algorithms: Estimation (one-step), Equations				
	Instruction focuses on developing pictorial and abstract understanding of multiplying by one-digit and two-digit multipliers. It is assumed students learned the foundation of multiplication through exploration of equal groups and arrays in grade 3. Multiplying by a single digit is taught at the abstract level of using an algorithm and recognizing the repetition of equal groups as the foundation for problem solving **(SE 4.4H).** Two days are devoted to developing an algorithm for multiplying two-digit by two-digit factors **(SE 4.4D)** through pictorial representations **(SE 4.4C).** Area models capitalize on the understanding of place value and replicate the products of the partial products algorithm. The pacing of using an algorithm for two-digit multipliers is accelerated and expected to be applied in problem-solving situations by the end of the week. Student expectation **4.4G** can be taught in the context of the Problem-Solving Protocol that supports **SE 4.4H**. Rounding to the greatest place value of each factor, except for single digits, capitalizes on the mechanics of rounding to estimate taught in grade 3.				
Process Standards	**4.1A** apply mathematics to problems arising in everyday life, society, and the workplace **4.1B** 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 **4.1C** select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems **4.1E** create and use representations to organize, record, and communicate mathematical ideas **4.1F** analyze mathematical relationships to connect and communicate mathematical ideas **4.1G** display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication				

Learning Objective / Demonstration of Learning					
Routines	*Problem of the Day* – Reinforce **SE 4.4A,** **SE 4.4G,** and **SE 4.10B** through a daily word problem. Reinforce the use of the Problem-Solving Protocol.				
Preview Challenge Suggestions	Terik multiplied his address by the number of people in his family. His mother said he made a mistake. 5 3 3 7 5 X 6 2,3 4 0 Explain Terik's mistake.	What shape is an array that represents 13 x 13? Why does it have this shape?	Ashley started to use the partial products method to show how to multiply 46 by 32. Finish Ashley's model and find the product of 46 and 32. 40 + 6 30 | 1,200 | 180 + 2 | | 12	Portia bought 8 boxes of small bags of chips for $12 per box. Draw a picture to represent all that Portia bought. How can she find the total amount she spent?	A problem on Matt's math homework is shown below. Is Matt's work correct? Why or why not? 45 = 40 + 5 x 27 = 20 + 7 800 100 280 35 1,235
Guiding Questions	**SE 4.4C** • What is an array and how can it represent a product? • How are factors and products written in an equation? • What is a square number and what are some ways it can be represented? • What is an area model? How does an area model connect factors and products to area? • Which method is more efficient to use when representing multiplication, arrays or area models? • How are arrays, area models, and equations related? **SE 4.4D** • What algorithms can be used to determine a product? • What are the parts of a multiplication equation called? • How can mental math be used to solve multiplication problems? • How can partial products be used to solve multiplication problems? • Explain how to implement the standard multiplication algorithm. • How are partial products and the standard multiplication algorithm related? • What is the same and what is different when multiplying a two-digit by a one-digit factor versus multiplying a two-digit by a two-digit factor?				

<table>
<tr><td>Guiding Questions</td><td colspan="3">SE 4.4H
• What is the purpose of the first and second reads of the Problem-Solving Protocol?
• How do you know when you read a story problem that involves multiplication?
• What tools do you find the most useful when solving a story problem?
• What is the purpose of the Number/Units/Verb table?
SE 4.4G
• How do you know a problem requires estimation?
• What is the purpose of estimating a solution?
• What is the relationship between rounding and estimating?
• What is the rule for rounding factors when multiplying?
• How does rounding numbers up impact the relationship between the estimate and the actual sum/difference?
• How does rounding numbers down impact the relationship between the estimate and the actual sum/difference?</td></tr>
<tr><td rowspan="2">Instructional Supports</td><td colspan="3">• Quality Work Criteria chart
• 1st Six Weeks CA Exemplar
• Strategies: Problem-Solving Protocol
• Anchor Charts: Problem-Solving Protocol for Multiplication; Multiplication Representations</td></tr>
<tr><td>• Textbook: HMH GOMath! Unit 2, Module 7, Lessons 7.4 – 7.8</td><td>• Textbook: HMH GOMath! Unit 2, Module 8; Lessons 8.3 – 8.6</td><td>• Textbook: HMH GOMath! Unit 2, Module 8; Lessons 8.2 & 8.7</td></tr>
</table>

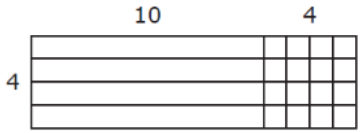
STAAR Stems

See Week 4 for STAAR Stems that assess **SE 4.4D**

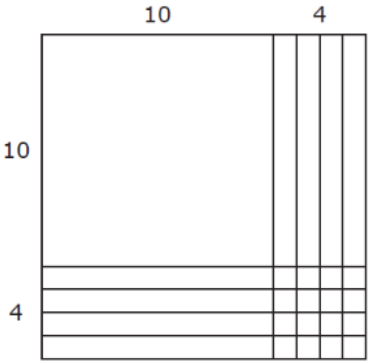
16 Which model represents $14 \times 14 = 196$?

SE 4.4C 2018

F



H



32 Jorge swam a total of 173 minutes during 3 days. He swam the same number of minutes each day. Which of the following is the best estimate of the number of minutes Jorge swam each day?

F 60

G 40

H 20

J 30

SE 4.4G 2016

6 Fran bought 4 shirts that were $13 each. She also bought a pair of socks for $4.29.

What was the total amount Fran paid for the shirts and socks?

F $21.29

G $56.29

H $69.16

J Not here

SE 4.4H 2018

16 The coaches at Xavier Elementary School bought cases of sports drinks for a field day. They bought 76 cases of drinks. Each case contained 24 drinks. All the drinks were given out to students. Each student received 3 sports drinks.

SE 4.4H 2017

How many students received sports drinks?

F 5,472

G 300

H 1,824

J 608

28 Valerie had a jug that contained 128 fl oz of salsa to put into bowls at a restaurant. She filled each bowl with 6 fl oz of salsa until there was not enough salsa left in the jug to completely fill another bowl.

How many fluid ounces of salsa were left in the jug?

F 22 fl oz

G 21 fl oz

SE 4.4H 2017

H 122 fl oz

J 2 fl oz

September 23 – 27, 2019

Week 6	Monday	Tuesday	Wednesday	Thursday	Friday
First Six Weeks Common Assessment Administration Window Adjust the days/dates accordingly.					
Readiness Standards	***First Six Weeks Common Assessment***	**4.4H** solve with fluency one- and two-step problems involving multiplication ~~and division, including interpreting remainders~~ **4.5A** represent multi-step problems ~~involving the four operations~~ with whole numbers using strip diagrams and equations with a letter standing for the unknown quantity			
Supporting Standards					
Standard Trajectory		Representations: Pictorial – Strip Diagram, Number Line, Area Models; Abstract – Algorithms: Equations, Variables			
		Student expectations **4.4H** and **4.5A** are coupled together to support two-step story problems that combine all four operations in some combination.; Only three operations are combined as division has not been formally introduced. The Problem-Solving Protocol supports all of the concepts and skills embodied in **SE 4.4H** and **SE 4.5A**. The inclusion of strip diagrams ensures problem solving stays at the pictorial level while the requirement of an equation with a variable provides a bridge to an abstract interpretation.			
Process Standards		**4.1A** apply mathematics to problems arising in everyday life, society, and the workplace **4.1B** 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 **4.1C** select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems **4.1E** create and use representations to organize, record, and communicate mathematical ideas **4.1F** analyze mathematical relationships to connect and communicate mathematical ideas **4.1G** display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication			

Learning Objective / Demonstration of Learning	***First Six Weeks Common Assessment***				
Routines		*Problem of the Day* – Reinforce student expectations **4.4B**, **4.4C**, **4.4D** through story problems that require the application of the algorithms and representations listed in the standards.			
Preview Challenge Suggestions		Ten teachers in the school have 23 students each. How can this situation be represented with a strip diagram? How can it be represented on a number line?	Write a story problem to explain this strip diagram. ? total oranges 25 | 25 | ● ● ● | 25 17 boxes	A student drew this strip diagram to represent 427 + 831 – 590 = t. Does the diagram represent the equation? Why or why not? 427 | 831 590 | t	Everyone in your class has $12 in their pockets. How can you find the total amount of money everyone has together? Represent the process with a diagram and an equation.
Guiding Questions		**SE 4.4H** • What is the purpose of the first and second reads of the Problem-Solving Protocol? • How do you know when you read a story problem that involves multiplication? • What tools do you find the most useful when solving a story problem? • What is the purpose of the Number/Units/Verb table? **SE 4.5A** • How can the information in a problem be analyzed to determine the question being asked and the relevant information provided and/or needed? • What types of plans and/or strategies can be used to solve problems? • How can solutions to problems be determined and justified? • How are strip diagrams used to represent the relationships between the quantities in a problem situation? • How are equations used to represent the relationship between quantities in problem situations?			

Instructional Supports	***First Six Weeks Common Assessment***	• Quality Work Criteria chart • 1st Six Weeks CA Exemplar • **Strategies:** Problem-Solving Protocol • **Anchor Chart:** Multiplication Representations; Problem-Solving Protocol for Multiplication • **Textbook:** HMH GOMath! Unit 3, Module 11; Lessons 11.1 – 11.3
STAAR Stems		See Week 5 for STAAR Stems that assess **SE 4.4H**.

11 Darren drank 3 glasses of water every day for 6 days. Each glass contained 12 fl oz of water.

SE 4.5A 2018

Which equation represents *w*, the total amount of water in fluid ounces that Darren drank during these 6 days?

A $3 + 6 + 12 = w$

B $12 \times 6 = w$

C $3 \times 6 \times 12 = w$

D $3 \times 12 \div 6 = w$

28 A business earned $96 for one job and $78 for a second job. The money was divided equally among the 3 partners who own the business.

SE 4.5A 2018

Which strip diagram represents *m*, the amount of money each partner received?

F

m	*m*	*m*
$78	$96	

H

m	*m*	*m*
$96		

G

m					
$78	$96	$78	$96	$78	$96

J

m	
$78	$96

STAAR Stems

11 It took Ian three years to collect 25,413 aluminum cans to recycle. In the first year he collected 8,917 cans, and in the second year he collected 7,639 cans.

Which equation can be used to find x, the number of cans Ian collected in the third year?

A $x = 25{,}413 - 8{,}917 - 7{,}639$

B $x = 25{,}413 + 8{,}917 + 7{,}639$

C $x = 8{,}917 + 7{,}639$

D $x = 8{,}917 - 7{,}639$

SE 4.5A 2017

10 A factory makes 400 refrigerators every day. The factory makes 125 more stoves per day than refrigerators. Which equation can be used to find x, the total number of refrigerators and stoves the factory makes in one day?

F $x = 400 + 400 + 125$

G $x = 400 + 125$

H $x = 400 + 400 - 125$

J $x = 400 - 125$

SE 4.5A 2016

21 Mark had 45 football cards. Josh had twice as many football cards as Mark. Josh then bought 5 more football cards. Which equation can be used to find f, the number of football cards Josh has now?

A $2 \times 45 + 5 = f$

B $2 \times 45 - 5 = f$

C $2 + 45 \times 5 = f$

D $2 + 45 + 5 = f$

SE 4.5A 2016