HISD | Elementary Curriculum and Development

INSPIRING TEACHING, IGNITING LITERACY & LEARNING.

2019-2020 Elementary Mathematics – H.O.M.E. Curriculum At-A-Glance – Grade 5

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Cycle 2 Week 1 April 13-17, 2020	I can represent and solve real-world problems involving perimeter and area of rectangles with whole numbers. Ⓡ MATH.5.4H	I can find the perimeter and area of the base of a rectangular prism and volume of the same rectangular prism. MATH.5.4G, ⓇMATH.5.4H	I can graph ordered pairs in the first quadrant. Ⓢ MATH.5.8A, Ⓢ MATH.5.8B, Ⓡ MATH.5.8C	I can graph ordered pairs in the first quadrant generated from an additive or multiplicative rule. Ⓡ MATH.5.8C, Ⓡ MATH.5.4C, Ⓢ MATH.5.4D	I can determine the rule given an input and output table and graph the ordered pairs in the first quadrant. Ⓡ MATH.5.8C, Ⓡ MATH.5.4C, Ⓢ MATH.5.4D
Cycle 2 Week 2 April 20-24, 2020	I can solve word problems using data from a frequency table. Ⓡ MATH.5.9C, Ⓢ MATH.5.9A	I can solve problems using data from a bar graph. Ⓡ MATH.5.9C, Ⓢ MATH.5.9A	I can solve problem using data from a dot plot. Ⓡ MATH.5.9C, Ⓢ MATH.5.9A	I can solve problems involving fractions using data from a frequency table to create a dot plot. Ⓡ MATH.5.9C, Ⓢ MATH.5.9A	I can solve problems using data from a stem and leaf plot. Ⓡ MATH.5.9C, Ⓢ MATH.5.9A
Cycle 3 Week 1 April 27 – May 1, 2020	I can use a strip diagram to solve multiplication problems involving fractions. Ⓢ MATH.5.3I	I can represent and solve multiplication problems involving fractions using pictorial models including an area model. Ⓢ MATH.5.3I	I can divide a unit fraction by a whole number using pictorial models including an area model. Ⓢ MATH.5.3J, Ⓡ MATH 5.3L	I can divide a whole number by a unit fraction using pictorial models including an area model. Ⓢ MATH.5.3J, ⓇMATH 5.3L	I can add whole numbers, fractions and decimals. Ⓡ MATH.5.3K
Cycle 3 Week 2 May 4-8, 2020	I can simplify numerical expressions with up to two levels of grouping with parentheses and brackets involving whole number operations. Ⓢ MATH.5.4E, Ⓡ MATH.5.4F	I can simplify numerical expressions involving positive rational numbers (whole numbers and decimals) with up to two levels of grouping. Ⓢ MATH.5.4E, Ⓡ MATH.5.4F	I can simplify numerical expressions involving positive rational numbers (whole numbers, decimals, and fractions) with up to two levels of grouping. Ⓢ MATH.5.4E, Ⓡ MATH.5.4F	I can simplify numerical expressions involving of positive rational numbers (whole numbers, decimals, and fractions) with up to two levels of grouping. Ⓢ MATH.5.4E, Ⓡ MATH.5.4F	I can simplify numerical expressions involving of positive rational numbers (whole numbers, decimals, and fractions) with up to two levels of grouping. Ⓢ MATH.5.4E, Ⓡ MATH.5.4F

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Mathematics – Grade 5
April 27 - May 8, 2020 – Week 1

Monday – 30 minutes

Activity / Task

I can use a strip diagram to represent and solve multiplication problems involving fractions.

Strip Diagram: A rectangular model used to show numerical relationships.

Look at this example:

There are 24 plants growing in the garden. Five-sixths of the plants are vegetables. How many vegetable plants are growing in the garden?

Guiding Questions
- How can you represent the total number of items?
- What fractional part of the total will you first need to identify?
- How many items will be in each part?

24 Plants					
4 plants	4 plants	4 plants	4 plants	4 plants	4 plants

Image by HISD Curriculum using Microsoft Word

Equation: $\frac{5}{6} \times 24 = 20$

"I drew a rectangle to represent the area of the garden. I know that there are 24 plants altogether in the garden. I know that the garden needs to be divided into 6 equal sections. This means that I must divide the total number of plants evenly between the six sections. Each section will have 4 plants. I can shade five-sixths of the garden green to show the plants. This means that five-sixths of the garden is the same as 20 plants."

Represent and solve the problems below using a strip diagram.

Problem A	**Problem B**	**Problem C**
Each batch of pancakes uses $\frac{7}{12}$ cups of milk. How much milk is needed for 3 batches of pancakes?	Leon bought 5 feet of ribbon to wrap a present. He used three-fourths of the ribbon. How much ribbon did Leon use to wrap the present?	Jason spent 32 hours on the computer last week. He spent $\frac{5}{8}$ of the time doing homework. How much time did Jason spend on his homework last week?
Choose one of the problems above. Explain how you solved the problem using mathematical language and complete sentences.		

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Tuesday – 30 minutes

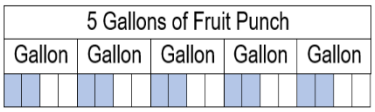
Activity / Task

I can use a model to solve multiplication problems involving fractions.

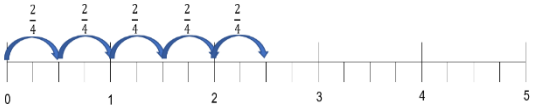
Look at this example:

Ted made 5 gallons of fruit punch. He used two-fourths cups of sugar for each gallon of fruit punch. How much sugar is needed to make 5 gallons of fruit punch?

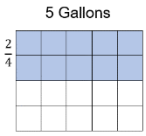
Strip Diagram



Number Line



Area Model



Images by HISD Curriculum using Microsoft Word

Equation: $5 \times \frac{2}{4} = 2\frac{2}{4}$

Guiding Questions
- How can you represent the total number of gallons in your model?
- What fractional part of each gallon will you first need to identify?
- How much sugar will be in each gallon?

"I will draw 5 rectangles to represent the gallons of fruit punch. I know each gallon needs to be partitioned into 4 equal parts. I can shade two-fourths of each gallon to represent the amount of sugar used to make the fruit punch."

Represent and solve the problems below using a model.

Problem A	**Problem B**	**Problem C**
There are 15 books on the shelf in Casey's room. Two-thirds of these books are fiction. How many fiction books are on the shelf in Casey's room?	There are 36 students in Ms. Viera's fifth-grade class. $\frac{4}{9}$ of her class are girls. How many girls are in Ms. Viera's homeroom class?	Mrs. Perez is planting her garden. The garden's length is $7\frac{3}{4}$ meters and its width is 8 meters. How large, in square meters, is Mrs. Perez's garden?

Choose one of the problems. Explain how you solved the problem using mathematical language and complete sentences.

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Wednesday – 30 minutes

Activity

I can divide a unit fraction by a whole number.

Look at this example.

Melinda has $\frac{1}{3}$ of a bag of popcorn that she wants to share equally among herself and two friends. What fraction of a bag of popcorn will one friend receive?

Model:

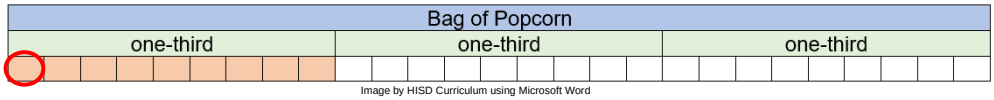

Image by HISD Curriculum using Microsoft Word

Expression: $\frac{1}{3} \div 9 = \frac{1}{27}$

"*Melinda has one-third of a whole bag of popcorn to share. She shared her popcorn with nine people. She wanted to know how much of a bag of popcorn each person received. I partitioned the whole bag into thirds. One-third was shared with nine people. Since the green represents one third, my whole must be 27. When I divided the green, third-sized rod by 9, I got the orange piece. The orange piece is one-twenty-seventh of the whole.*"

Represent and solve the problem below using a strip diagram.

Rosetta has 1/8 bag of cat food left. She divides the remaining cat food into 12 equal sized portions. What fraction of a bag of cat food is used in each portion?

Explain how you solved the problem using mathematical language and complete sentences.

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Thursday – 30 minutes

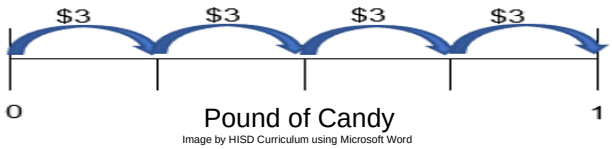
Activity

I can divide a whole number by a unit fraction.

Look at this example:

Jose bought $\frac{1}{4}$ pound of candy for $3. How much would a pound of candy cost?

Number Line



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Equation

$3 \div \frac{1}{4} = \$12$

"*I know that Jose bought one-fourth of a pound of candy. I used a number line to represent the whole pound and partitioned it into fourths. I know that one-fourth of a pound is $3. I then know that each one-fourth is $3. If I divide three by one-fourth, the total cost of a pound of candy is $12.*

Represent and solve the problem below using a number line.

Jessica has 2 cups of sugar. Her recipe calls for ¼ cup of sugar for each batch of cookies. With the sugar she has, how many batches of cookies can Jessica make?

Explain how you solved the problem using mathematical language and complete sentences.

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Friday – 30 minutes

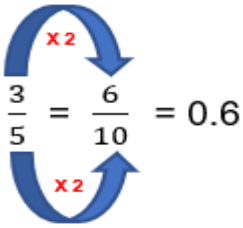
Activity

I can solve problems that include whole numbers, decimals, and fractions.

Look at this example:

Drake is training for a marathon. He jogged for 2.28 miles from his house to the park. Then he decided to jog $2\frac{3}{5}$ miles from the park to the store. In miles, what is the total distance Drake jogged from his house to the park to the store?

Guiding Questions:
- How can you use estimation to determine a reasonable solution for this problem?
- What operation(s) might you use to solve this problem?
- How can you write an expression to represent the problem?
- How can you express $\frac{3}{5}$ as a decimal?



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Estimate

$2.28 + 2\frac{3}{5} = \square$

2 + 3 = 5

Drake will jog about 5 miles.

Solve

$2.28 + 2\frac{3}{5} = \square$

2.28 + 2.6 = 4.88

Drake will jog 4.88 miles.

Complete one of the following activities.

Anchor Chart

Create a personal anchor chart showing the process of adding and subtracting fractions. Then create at least four problems that involve addition or subtraction of fractions for your friends to solve. Be sure to include an answer key with the work shown.

Writing a Letter

Write a letter to a friend explaining how you would solve this problem:

Marta has 8 feet of yarn she wants to use making crafts. She uses $3\frac{3}{4}$ feet to knit a baby blanket. She uses another $\frac{2}{3}$ feet to make a friendship bracelet. How many feet of yarn does Marta still have to make crafts?

Be sure to use correct punctuation and proper grammar in your letter.

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April 27 - May 8, 2020 – Week 2

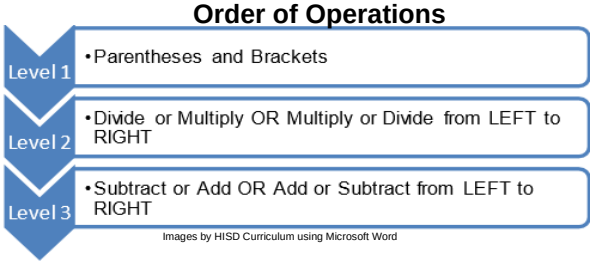
Monday – 30 minutes

Activity

I can simplify numerical expressions with up to two levels of grouping with parentheses and brackets involving whole number operations.

Review the order of operations and example below:

Order of Operations



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Example:

83 - [2 + (14 x 5)]
83 - [2 + (70)]
83 - 72
11

Complete the problems below.

Simplify the expression below and explain the steps you took to solve.

276 – [(29 + 14) + (4 – 2)]

Kameron and Jordan simplified the same expression.

Kameron	Jordan
44 + [(12 ÷ 4) x 7]	44 + [(12 ÷ 4) x 7]
56 ÷ 4 x 7	44 + 3 x 7
14 x 7	44 + 21
98	65

Who simplified the expression correctly? How do you know?

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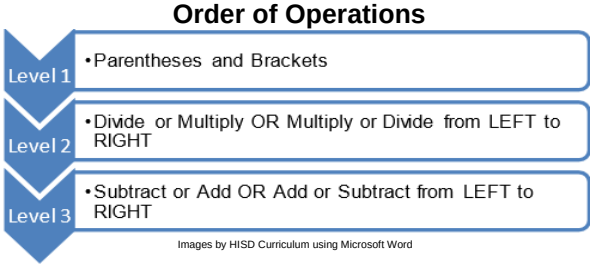
Tuesday – 30 minutes

Activity

I can simplify numerical expressions involving positive rational numbers (whole numbers and decimals) with up to two levels of grouping.

Review the order of operations below.

Order of Operations



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Simplify the four expressions using order of operations.

8.63 + 4 - 3.095 - 2.1 - 0.5	**(8.63 + 4 - 3.095) - (2.1 - 0.5)**
8.63 + (4 - 3.095) - (2.1 - 0.5)	**8.63 + 4 - (3.095 - 2.1 - 0.5)**

- Why is it important to follow an order of operations when you are simplifying an expression?

- Why are the parentheses important in a numerical expression?

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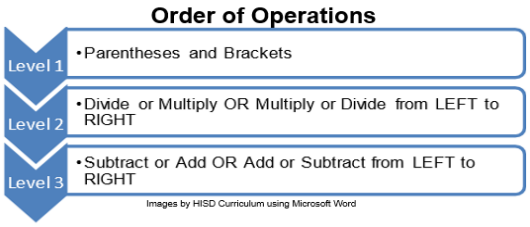
Activity

I can simplify numerical expressions involving positive rational numbers (whole numbers, decimals, and fractions) with up to two levels of grouping.

Look at the example below.

Jaime rode her bike 18 miles on Sunday. On Monday, Jaime rode 2 times as far as she did on Sunday. On Tuesday Jaime rode her bike 5 $\frac{1}{2}$ miles less than on Monday. Jaime wrote the following expression to determine the total number of miles she rode her bike.

18 + (18 x 2) + [(18 x 2) - 5 $\frac{1}{2}$]



18 + (18 x 2) + [(36) – 5.5]
18 + (18 x 2) + [30.5]
18 + (36) + [30.5]
84.5

I used order of operations to simplify this expression. I started in the brackets and saw parentheses. I multiplied 18 times to 2 and got a product of 36. I like decimals and know that one-half is the same as zero and five tenths. I then subtracted 5.5 from 36 for a difference of 30.5. I completed the math within the brackets. I saw another set of parentheses and multiplied 18 times 2 for a product of 36. I then added 18, 36, and 30.5 for a sum of 84.5.

Simplify the expression below.

[6 x [5 $\frac{1}{2}$ – 3.75)] ÷ 3	Write a letter to your friend explaining your thinking.

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Thursday – 30 minutes

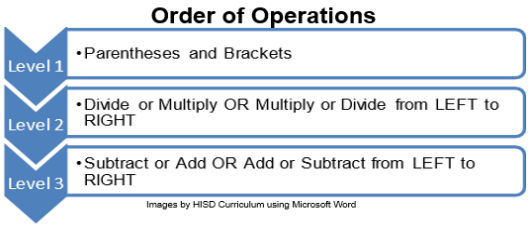
Activity

I can simplify numerical expressions involving of positive rational numbers (whole numbers, decimals, and fractions) with up to two levels of grouping.

Look at the example below.

Karen jogged 4 $\frac{3}{4}$ miles on Wednesday. On Friday, Karen jogged 3.5 miles. Karen jogged 2 fewer miles on Saturday than she jogged on Wednesday. The expression below can be used to calculate how many more miles Karen jogged on Wednesday and Saturday than on Friday.

$$[4\frac{3}{4} + (4\frac{3}{4} - 2)] - 3.5$$



$[4\frac{3}{4} + (4\frac{3}{4} - 2)] - 3.5$
$[4.75 + (4.75 - 2)] - 3.5$
$[4.75 + (2.75)] - 3.5$
$[7.5] - 3.5$
4

I used order of operations to simplify this expression. I saw that I the expression had fractions and decimals. I converted $\frac{3}{4}$ to 0.75. I saw brackets and parentheses. I started in the brackets and solved parentheses. I subtracted 2 from 4.75 and got a difference of 2.75. I then added 4.75 and 2.75 and got a sum 7.5. I then subtracted 3.5 from 7.5 and got a difference of 4.

Simplify the expression below.

$[30 - (7\frac{1}{2} + 5.65)] \times 7$	Explain the process you used to simplify the expression.

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April 27 - May 8, 2020 – Week 2

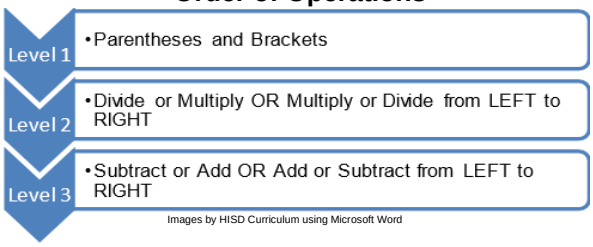
Friday – 30 minutes

Activity

I can simplify numerical expressions involving of positive rational numbers (whole numbers, decimals, and fractions) with up to two levels of grouping.

Review the order of operations below.

Order of Operations



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Simplify the expressions below using order of operations.

$[7\frac{3}{10} - 0.24 + (5 - 2\frac{3}{10})] - (1.37 + 0.982)$	$23\frac{1}{2} - [2 + (14\frac{3}{4} + 5)]$
$3\,[\,6.8 + (1\frac{1}{4} - \frac{1}{2})]$	$8\frac{1}{3} - (2.5 + 3.5) + 4\frac{1}{6}$