HISD | Elementary Curriculum and Development

INSPIRING TEACHING, IGNITING LITERACY & LEARNING.

2019-2020 Elementary Mathematics – H.O.M.E. Distance Learning At-A-Glance – Grade 4

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Cycle 2 Week 1 April 13-17, 2020	I can solve problems using data from a frequency table involving whole numbers. Ⓡ MATH.4.9A, Ⓢ MATH.4.9B	I can solve problems using data from a frequency table involving whole numbers and decimals. Ⓡ MATH.4.9A, Ⓢ MATH.4.9B	I can solve problems using data from a frequency table involving whole numbers and fractions. Ⓡ MATH.4.9A, Ⓢ MATH.4.9B	I can solve problems using data from a frequency table and a dot plot involving whole numbers. Ⓡ MATH.4.9A, Ⓢ MATH.4.9B	I can represent and solve problems using data from a frequency table and a dot plot involving whole numbers. Ⓡ MATH.4.9A, Ⓢ MATH.4.9B
Cycle 2 Week 2 April 20-24, 2020	I can represent and solve problems using data from a stem-and-leaf plot involving whole numbers. Ⓡ MATH.4.9A, Ⓢ MATH.4.9B	I can represent and solve problems using data from a dot plot and stem-and-leaf plot involving whole numbers. Ⓡ MATH.4.9A, Ⓢ MATH.4.9B	I can solve problems using data from a stem-and-leaf plot involving whole numbers and decimals. Ⓡ MATH.4.9A, Ⓢ MATH.4.9B	I can solve problems using data from a stem-and-leaf plot involving whole numbers and fractions. Ⓡ MATH.4.9A, Ⓢ MATH.4.9B	I can represent and solve problems using data from a stem and leaf plot, frequency table, and dot plot. Ⓡ MATH.4.9A, Ⓢ MATH.4.9B
Cycle 3 Week 1 April 27 – May 1, 2020	I can represent the value of a decimal to the hundredths using concrete and pictorial models, including money Ⓢ MATH.4.2E	I can represent the value of a decimal to the hundredths in expanded notation (decimal and fraction forms). Ⓢ MATH.4.2B	I can represent the value of a decimal to the hundredths in expanded notation (decimal and fraction forms). Ⓢ MATH.4.2B	I can explain the difference between fixed and variable expenses in real-world situations. Ⓢ MATH.4.10A	I can calculate profit in a real-world situation. Ⓢ MATH.4.10B
Cycle 3 Week 2 May 4-8, 2020	I can calculate profit in a real-world situation. Ⓢ MATH.4.10B	I can describe the basic purpose of financial institutions and the advantage and disadvantages of various savings options. Ⓢ MATH.4.10C, Ⓢ MATH.4.10E	I can describe how to allocate a weekly allowance among spending and saving. Ⓢ MATH.4.10D	I can apply knowledge of right angles to identify acute, right, and obtuse triangles. Ⓢ MATH.4.6C	I can use a protractor to measure angles less than or equal to 180° when NOT aligned to the zero line of the protractor. Ⓡ MATH.4.7C

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Mathematics – Grade 4
April 27 - May 8, 2020 – Week 1

Monday –30 minutes

Activity / Task

I can represent the value of a decimal to the hundredths using concrete and pictorial models, including money.

Money can be used to help you represent decimals that name tenths and hundredths. Use the information in the table to the right as a reference.

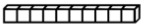
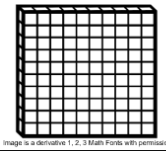
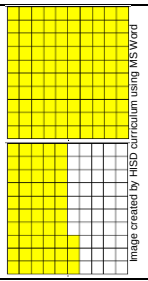
Base-ten	Money	Decimal Representation
Unit: Image is a derivative 1, 2, 3 Math Fonts with permission	**Penny**: Image is a derivative 1, 2, 3 Math Fonts with permission	One hundredth: 0.01 One hundredth (dollar): $0.01 1 penny is one hundredth of 1 dollar
Long:  Image is a derivative 1, 2, 3 Math Fonts with permission	**Dime**: Image is a derivative 1, 2, 3 Math Fonts with permission	One tenth: 0.1 One tenth (dollar): $0.10 1 dime is one tenth of 1 dollar
Flat:  Image is a derivative 1, 2, 3 Math Fonts with permission	**Dollar**: ©ivanatty – stock.adobe.com	One whole: 1 One whole (dollar): $1.00 100 pennies is 1 dollar 10 dimes is 1 dollar

Image created by HISD curriculum using MS Word

Questions to think about:

- What is the value of the digit in the tenths place? How do you know?
- What is the value of the digit in the hundredths place? How do you know?
- What is the value of the digit in the ones place? How do you know?

Money	Standard Form	Expanded Form	Pictorial (Base-Ten Blocks)	Grid
©ivanatty – stock.adobe.com Image by HISD Curriculum using 1,2,3 Math Fonts				
		3 + 0.4 + 0.02		
				 Image created by HISD curriculum using MS Word

Resources: Grid paper

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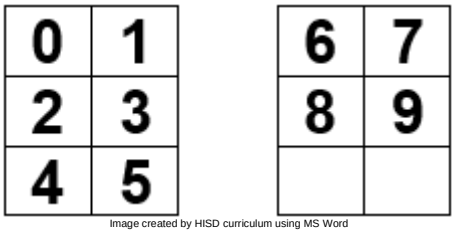
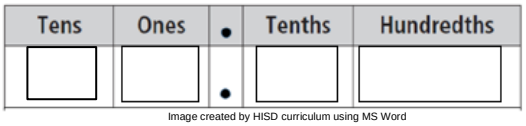
Mathematics – Grade 4
April 27 - May 8, 2020 – Week 1

Tuesday – 30 minutes	
Activity / Task **I can represent the value of a decimal to the hundredths in expanded notation (decimal and fraction forms).**	Divide a piece of paper into six equal sections. Repeat the process on another piece of paper. Write the digits 0-9 in the sections on the paper.  Image created by HISD curriculum using MS Word Cut out the digit cards, shuffle them, and place them face down on the table. **Step 1:** Pull four digit cards and place them in the place value chart like the one below. Place Value Chart:  Image created by HISD curriculum using MS Word **Step 2:** Represent the number created in standard form, expanded notation (decimals), and expanded notation (fractions). • Standard form: • Expanded Notation (decimals): • Expanded Notation (fractions): **Step 3:** Repeat the steps 1 & 2 three times. **Practice:** Read and solve the following problem. Jonathan bought a video game. The price of the video game was $25.35. How can we use expanded notation to represent the value of the digits in this number? • Create a place value chart. • Write this number in expanded notation using decimal and fractional representations. • Expanded Notation (decimals): • Expanded Notation (fractions): Explain how the representations are similar and different. Is there another way to represent this number?
Resources	Paper (to create digit cards), scissors

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Wednesday – 30 minutes

Activity / Task

I can represent the value of a decimal to the hundredths in expanded notation (decimal and fraction forms).

Review the previous activities for 3-5 minutes.

Look at the money represented below then use the information to complete the table.

For the set of money above, draw a place value chart and place the number in the chart. Represent each digit in the place value chart. Then, complete table below.

Standard Form	
Expanded Form	
Expanded Notation (decimals)	
Expanded Notation (fractions)	

Amount of money: $ 8.21
Draw a place value chart and represent each digit in the place value chart. Then, complete the table below.

Standard Form	
Expanded Form	
Expanded Notation (decimals)	
Expanded Notation (fractions)	

Amount of money: $17.09
Draw a place value chart and represent each digit in the place value chart. Then, complete the table below.

Standard Form	
Expanded Form	
Expanded Notation (decimals)	
Expanded Notation (fractions)	

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Mathematics – Grade 4
April 27 - May 8, 2020 – Week 1

Thursday – 30 minutes

Activity / Task

I can explain the difference between fixed and variable expenses in real-world situations.

Review the vocabulary.

Fixed Expense: Expenses that occur regularly and remain the same (i.e., remains consistent month to month such as car payment)

Variable Expense: Expenses that vary or change depending on a person's need (i.e., vary in cost from month to month such as water bill)

Provided are a set of expenses that are used in real-world situations. Sort these expenses to complete the two-column chart below as fixed expenses or variable expenses.

monthly rent	monthly cell phone bill	electricity	car insurance	gasoline for the car
cable	gift for a friend	gym membership	groceries	entertainment

Fixed Expenses	Variable Expenses
car payment	*water bill*

Use the chart to complete the sentence stems and answer the questions.

- I know that car insurance is a _____ expense because_____.
- I know that groceries are a _____expense because_____.

Questions:
1. How many more fixed and variable expenses can you think of? Add them to the chart above.

2. Rank the expenses from most important to least important.

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Friday – 30 minutes

Activity / Task

I can calculate profit in a real-world situation.

Review the vocabulary.

Profit: An amount calculated by subtracting one's expenses from one's income.

Example:
Lauren sells friendship bracelets for $3 each. It costs her $2 to make each bracelet. She sold 9 bracelets at the school store. What is Lauren's profit?

Solution:

- The **total expense** for making 9 bracelets is **$2 x 9 = $18**

Total expenses

?								
$2	$2	$2	$2	$2	$2	$2	$2	$2
B1	B2	B3	B4	B5	B6	B7	B8	B9

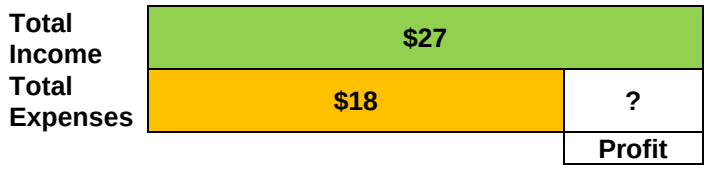
- The **total money (income)** Lauren received from making the bracelet is **$3 x 9 = $27**

Total income

?								
$3	$3	$3	$3	$3	$3	$3	$3	$3
B1	B2	B3	B4	B5	B6	B7	B8	B9

- To find the profit we will find the difference between the total income and the total expenses.

Profit = Total Income – Total Expenses



The total profit Lauren received is **$27 – $18 = $9**

Practice: Solve and write your solution using the sentence stems below:

1. Nathan sold lemonade in front of his house. The cost of preparing the lemonade was $7.45. The money he received from the sale of the lemonade was $37.50. What was Nathan's profit?

2. Randy sold pencils decorated with a fancy eraser. Randy's expenses were $23.75 for supplies. She sold 35 pencils for $1.00 each. What was Randy's profit?

3. John operates a candy store business. John's expenses for his candy store are chocolate $76.59, jellybeans $54.23, taffy $17, and lollipops $37.54. Last week, John made $875 in candy sales. What was John's profit for the week?

   - The total expenses are _____ because _____.
   - The total income is _____ because _____.
   - The total profit is _____ because _____.

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Monday – 30 minutes

Activity / Task

I can calculate profit in a real-world situation.

Review the previous lesson from Friday for five minutes.

Profit is the amount calculated by subtracting one's expenses from one's income.

Profit = Total Income – Total Expenses

Practice:

1. Heather bought an old wooden bookcase. She repaired it and put a new coat of stain on it. When it was finished, she sold it to a neighbor. Heather made the following list to help her calculate her profit. How much profit did Heather make? Write answer using a complete sentence.

Price paid for the bookcase	$15.00
Cost to repair the bookcase	$7.50
Cost to put new stain on the bookcase	$4.50
Selling price of the bookcase	$65.00

- I know $_____ represents money received (total income), and $_____ represents the cost (total expenses).

Answer:_____

2. Jason mowed 15 lawns for $25 each. He spent $16.08 on fuel for his lawn mower. What was Jason's profit?

- I know $_____ represents money received (total income), and $_____ represents the cost (total expenses).

Answer:_____

3. Cali purchased supplies and props for three photo shoots. She received $78 in payment for each of the three photo shoots. What was Cali's profit?

Price paid for all supplies needed	$38.90
Props for all photo shoots	$15.28
Selling price for each photo shoot	$78

- I know $_____ represents money received (total income), and $_____ represents the cost (total expenses).

Answer:_____

4. Kevin sold 30 burgers today for $6.50 each. The supplies to make the burgers cost Kevin $89.20. What was Kevin's profit?

- I know $_____ represents money received (total income), and $_____ represents the cost (total expenses).

Answer:_____

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2019-2020 HISD @ H.O.M.E. – Distance Learning
Mathematics – Grade 4
April 27 - May 8, 2020 – Week 2

Tuesday – 30 minutes

Activity / Task

I can describe the basic purpose of financial institutions and the advantage and disadvantages of various savings options.

Vocabulary Review:

Financial Institution: A place, such as a **bank or credit union**, which provides financial services (e.g., keeps money safe, borrows money, and lends money.)

Borrow: To receive money from a financial institution or person with the intent of repaying the amount, usually with interest.

Lend: To give money to a borrower with an expectation of repayment.

Make a list of things you would save money for and sort them into two groups, short term and long-term goals.

Short-Term: These items could be purchased quickly.

Long-Term: These items could take a while to be purchased.

Short Term Saving Goals	Long term Saving Goals
dinner	*car*

How could you save your money for these items that need to be purchased long-term?

- I can save money in a _____ to purchase my long-term items.
  (Piggy Bank, Bank)

How could you save your money for these items that need to be purchased short-term?

- I can save money in a _____ to purchase my short-term items.
  (Piggy Bank, Bank)

Practice:
1. Mr. and Mrs. Troutman have been saving money for several years to purchase a new home. However, they do not have enough money to purchase one yet. How can a bank help the Trautman's to buy a new house?

2. William has $125 saved from doing extra chores and jobs around the house. His mom takes him to the bank to open a savings account. What are some advantages to keeping his money in the bank rather than at his home?

Challenge
Make a T-chart labeled Advantages and Disadvantages. List the advantages and disadvantages of saving money using a financial institution versus just keeping it at home (e.g., hiding it under a bed)

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Wednesday – 30 minutes

Activity / Task

I can describe how to allocate a weekly allowance among spending and saving.

Think about the following questions:

- What is an allowance?
- Do you earn an allowance?
- Why would an allowance be a worthwhile thing for students to earn?

Now, there are different ways a weekly allowance can be allocated (e.g., spent, saved, or shared).

Allocate: To divide financial resources into a spending and savings plan.

Allowance: An amount of money that is given to someone regularly or for a specific purpose.

Practice:
Complete the weekly allowance budget table below.

- You will choose to spend, share or save your allowance each week.
- You are required to do two of the three options. (spend, share, and/or save)
- You will choose from the action items below to add to your weekly allowance budget table.

Using the information in the table below, determine how many weeks it will take you to buy the desired item, based on whether you spend, save, and/or share a portion of your allowance each week. **The first row (week) is done for you.**

Weekly Allowance: $5.00
Action: Save, Spend, or Share
Desired Item: $20

Note: *Each row across the "spend, share, or save" section must equal the allowance amount for the week which is $ 5.00.*

Action List	
Purchase chewing gum $0.75	Purchase chips $1.50
gave money to animal shelter $2.00	Purchase a slice of pizza $3.25
Purchase pencils $2.50	Give money to help sick kids $1.00

Student Weekly Allowance Budget

Week	Spend	Share	Save	Total Saved
1		*Gave $ 1 to church*	*$ 4.00*	*$ 4.00*
2				
3				
4				
5				
6				

1. How many weeks will it take you to purchase the desired items?
2. Which activity is your favorite, spend, save, or share and why?

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Mathematics – Grade 4
April 27 - May 8, 2020 – Week 2

Thursday – 30 minutes

Activity / Task

I can identify acute, right, and obtuse angles.

Use the map below to identify the types of angles with the labels A-F as acute, obtuse, or right angles.

Image by philm1310 from Pixabay

Complete the table using the map above.

Angle	Type of Angle	Explain Because …
A	*Right angle*	*When the two rays meet at a point it forms a perfect square which is a 90° angle.*
B		
C		
D		
E		
F		

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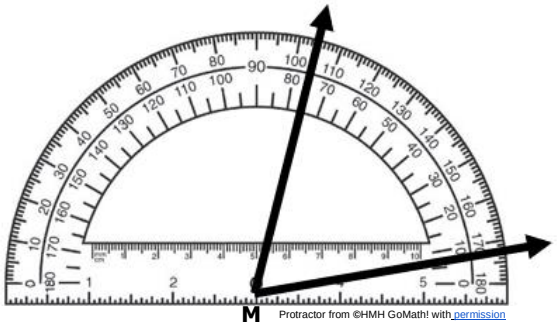
Mathematics – Grade 4
April 27 - May 8, 2020 – Week 2

Friday – 30 minutes

Activity / Task

I can use a protractor to measure angles less than or equal to 180° when NOT aligned to the zero line of the protractor.

Study the protractor.



Protractor from ©HMH GoMath! with permission

Solution:

Angle M is an acute angle because its angle measurement is less than 90°.

To determine the measurement of the angle I will find the difference between the two rays.

I am choosing to use the bottom numbers on the protractor to read where the rays cross.

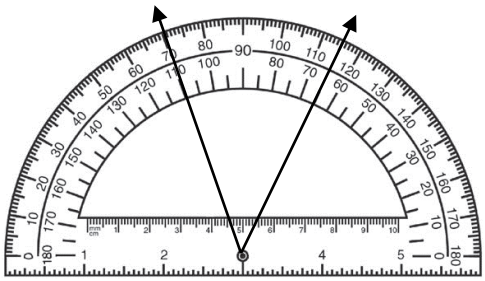
I see one ray crosses at 8°, and I see that the other ray crosses at 76°.

The difference between 76° and 8° will give me the angle measurement for the angle. 76° - 8° = 68°

∠M = 68°

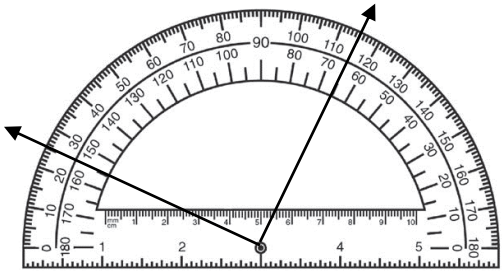
Practice: Determine the angle measurements for the angles provided below. For each of the angles given, provide a description on how to find the angle measurement like the example provided above.

1.



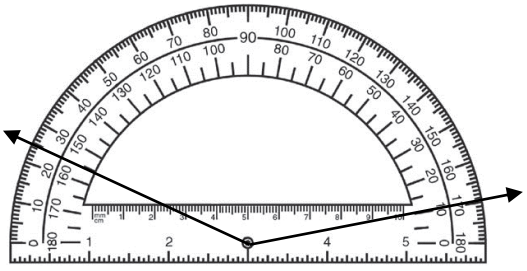
A

2.



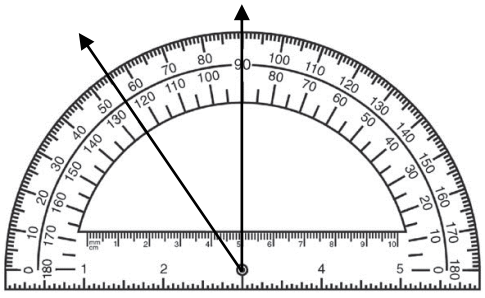
B

3.



C

4.



D

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