Dear Parents,

You made it! Summer vacation is here and your job as homeschool facilitator is over. Brains need rest, so make sure to take time to have fun and disconnect from school. However, each student is expected to engage in fun and consistent math practice throughout the summer to avoid the summer slide. As the last two months of the year were taught in a distance learning model, the math units for the upcoming year have been adjusted to ensure that any concepts from this year are reviewed and solidified.

The pivotal learning goals in math this year included mastering addition and subtraction within 1000, understanding and solving multiplication and division problems within 100, and recalling from memory the multiplication facts. Students also applied this knowledge to word problems, including multi-step problems. In fourth grade, students will be expected to master addition and subtraction, multiply and divide multi-digit numbers, and begin their foundation of fractions and decimals.

In order to retain these concepts and skills, practice throughout the summer is crucial. Below is a suggested schedule and resources for you to use to continue math practice at home. The goal is to have the girls retain the concepts from this year but also enjoy it. The pace and pressure should be easy and manageable for both you and your daughter.

Summer Work Expectations and Guidelines:
1. **Multiplication facts should be practiced consistently!**
2. Each week complete one page from this packet and 1 - 2 open-ended problems from the first page of this packet.
   - The packet includes problems from different areas of the 3rd grade curriculum. It is expected that the students are entering into 4th grade having mastered these areas.
   - If your child completes the packet in June and doesn't solve any math problems for the rest of the summer, she will lose some very important concepts. This packet should be spread out to provide consistent practice.
   - It includes some questions that are from the next grade level. Do not worry if your child has difficulty or hasn't mastered these extensions.

Recommended Activities, Games, Websites, and Apps
Family Activities:
- Board games are a wonderful way for your child to learn turn-taking, game strategies, money, counting and perseverance. These are widely overlooked but critical to developing a strong mathematician.
  - Good games: Shut the Box, Blokus, Monopoly, Sorry, Mancala, Chess, 24, Muggins
- Measure, cook and bake with your child!

Games:

Acing Math - (Multiple Operations)
60 Math Games using only a deck of cards!

Dice Games:
https://mailchi.mp/mathforlove/dice-games-for-math-at-home

Websites:

Table Talk Math: a book and an account on Instagram

Bedtime Math: a resource for parents to do with their child

Youcubed.org: https://www.youcubed.org/resource/apps-games/

San Fran's ideas for home (books & activities):
https://www.sfusd.edu/learning/resources-learning/continuity-learning/families

Fluency:
http://calculationnation.nctm.org/Games/
https://www.factmonster.com/math/flashcards
https://www.mathplayground.com/index_multiplication_dvision.html

Apps for fluency, problem-solving and math fun:

Motion Math
Name that Number - Also known as Target, using addition & subtraction to reach a target number
Kakooma - addition challenges in puzzle format
King of Math - Various types of math problems
Baseball Multiplication - single digit multiplication
Beat the Computer - single digit multiplication
Thinking Blocks – Model and solve word problems (multiple types)
Divisibility – Multiplication and division game

Puzzles, logic, enrichment and problem-solving apps:

Math Munch: https://mathmunch.org/
Sumaze: http://mei.org.uk/sumaze
Math Doodles: http://www.carstensstudios.com/mathdoodles/mathdoodles.htm
Game about squares: http://gameaboutsquares.com/
Symmetry Artist: https://www.mathsisfun.com/geometry/symmetry-artist.html

Open Response Questions

Pick 1 - 2 problems per week. Solve on a separate sheet.

a. Record a number sequence of at least ten numbers where each number is three less than the previous number.	b. Choose two of the following: _ x _ = 36 _ x _= 54 _ x _ = 72 How many different pairs of numbers can you use to fill the blanks? What are they?
c. Sam rolled two dice and multiplied the results. He got a product that was an even number. What numbers might Sam have rolled?	d. Write your own multiplication story for 9 x 6 and tell how you solved the problem. What other strategies could you have used to solve this problem?
e. Nancy baked 4 trays of muffins. Each tray held 6 muffins. She took 15 muffins to school for the bake sale and left the rest at home to share with her family. How many muffins did Nancy leave at home?	f. Suppose that (12, 24, or 36) musicians in a marching band were getting ready for a parade. How many different ways could the musicians arrange themselves into equal rows? Record your thinking using arrays, numbers or words.
g. I left school after 3:15p.m., walked for 25 minutes and was home before 3:45p.m. What time might I have a) left school b) arrived home? Represent two possible solutions on a number line diagram.	h. Using all of the digits 4, 5, 6, 7, 8, 9 and any operation (add, subtract, multiply, divide), what numbers can you make?
i. I subtracted a three-digit number from a three-digit number and got a correct answer of 249. What might the two numbers be?	j. I found a bag of shapes, all of which were different and had 4, or more, sides. If there was a total of 16 sides, what shapes might be in the bag? Show as many different solutions as you can.
k. Draw two different quadrilaterals. How are these shapes alike? How are they different?	l. The answer to a division question is 3. What might the question be? Record as many different solutions as you can.
m. I rounded two numbers to the nearest hundred and added them for a sum of 500. What might the two numbers have been? Show 5 possible solutions.	n. Choose two 3-digit numbers less than 500. Write and solve an addition and a related subtraction number story using these numbers.

Name: _____

Place Value

Write the numerals below in expanded form.

809 = _____

3,195 = _____

*62,014 = _____

Write the numbers in standard (number) form.

800 + 20 + 6 = _____

_____ = 3,000 + 500 + 90 + 1

*20,000 + 8,000 + 500 + 10 + 5 = _____

Use <, >, or = to make the statements true.

a. 35,204 ☐ 35,402   **b.** 6,991 ☐ 9,601

*c. 259,242 ☐ 260,321   **d.** 39 + 41 ☐ 38 + 41

Rounding numbers:

804	***2,328**
to the nearest 10 _____	to the nearest 10 _____
	to the nearest 100 _____
to the nearest 100 _____	to the nearest 1,000_____

Place Value

Write the numerals below in expanded form.

382 = _____

5,104 = _____

*55,291 = _____

Write the numbers in standard (number) form.

600 + 10 + 9 = _____

_____ = 9,000 + 300 + 50 + 8

*60,000 + 7,000 + 400 + 30 + 2 = _____

Use <, >, or = to make the statements true.

a. 44,692 ☐ 44,962   **b.** 5,291 ☐ 2,291

*c. 349,899 ☐ 350,125   **d.** 199 + 102 ☐ 201 + 99

Rounding numbers:

<u>314</u>	<u>*25,695</u>
to the nearest 10 _____ to the nearest 100 _____	to the nearest 10 _____ to the nearest 100 _____ to the nearest 1,000 _____

Addition and Subtraction

Solve the problems below using any efficient strategy.

324 + 219	612 + 288	4,985 + 1,429

852 - 361	749 - 392	811 - 352

4,291 - 2,109	6,355 - 3,179

Addition and Subtraction

Solve the problems below using any efficient strategy.

643 + 238	2,516 + 3,385	2,148 + 1,471

703 - 297	2,843 - 1,237	1,005 - 489

2,238 - 1,125	3,426 - 1,387

Solving Story Problems

a. The 2nd and 3rd grade classes want to raise $500 for an animal shelter. The 2nd grade class has raised $255. The 3rd grade raised $68 fewer than 2nd grade. Did they reach their goal? If not, how much more money do they need to raise?

b. Joey and his brother collected shells all summer at the beach. At the end of the summer Joey had 615 shells, which was 125 more than his brother. How many shells did they collect altogether?

c. Ms. Sen brought in 5 bags of candy to fill the estimation jar. The estimation jar had 60 candies in it. How many candies were in each bag?

d. The 32 3rd grade students went on a field trip to see *101 Dalmatians*. Each car could fit 4 students. How many cars did they need to take?

e. Ella was making necklaces to sell. She put 8 beads on each necklace. She made 10 necklaces. She sold each necklace for $3.00. How much money did she earn?

Solving Story Problems

a. A school was giving a pizza party to the class that raised the most money for a charity. The school's goal was to raise $1,000. The 4th grade came in second by raising $375, which was $152 less than the winning grade. How much did the winning grade raise?

b. At the bake sale on Tuesday, candies were sold with 10 candies per bag. 9 bags were sold at recess. 8 bags were sold afterschool. How many candies were sold on Tuesday?

c. Ella and her two brothers were making lemonade for her stand. They earned $18 dollars in the morning and $15 dollars in the afternoon. If they shared the earnings equally, how much money did each child get?

d. For Matty's birthday party, they needed 56 slices of pizza. If a large pizza comes with 8 slices, how many pizzas did they need to order?

e. Ella was making lemonade for her stand. She put 9 lemons in each batch. She made 7 batches of lemonade. How many lemons did she use?

Multiplication

Use your facts to help you solve the problems below.

a. 15 x 6 = _____

b. 19 x 3 = _____

c. 14 x 4 = _____

d*. 18 x 11 = _____

e*

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       20           7
   ┌────────────┬────────┐
 5 │     ?      │   ?    │
   └────────────┴────────┘
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a. 10 x 18 = _____   **b.** 7 x 100 = _____

c. 25 x 100 = _____   **d.** 30 x 10 = _____

Multiplication

Use your facts to help you solve the problems below.

a. 13 x 7 = _____

b. 14 x 6 = _____

c. 23 x 5 = _____

d*. 15 x 13 = _____

e*. 25 x 17 = _____

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a. 32 x 10 = _____   **b.** 10 x 40 = _____

c. 64 x 100 =_____   **d.** 9 x 100 = _____

Division

a. 42 ÷ 6 =	**b.** 27 ÷ 3 =
c. 24 ÷ 8 =	**d.** 60 ÷ 5 =
e. 56 ÷ 8 =	**f.** 36 ÷ 4 =
e. 63 ÷ 7 =	**f.** 35 ÷ 5 =
g. 54 ÷ 9 =	**h.** 32 ÷ 8 =
i. 60 ÷ 10 =	**j.** 20 ÷ 4 =
k. 24 ÷ 6 =	**l.** 18 ÷ 6 =

Solve the problems below using any strategy. Don't forget to use multiplication to help you!

Example: 78 ÷ 6 = *(Multiplying up and/or using an array)* *Step 1: 6 x 10 = 60* *Step 2: 18 more is needed & 6 x 3 = 18* *so 6 x 13 = 78* **or** 10 3 6 | 60 | 18 | = 78	**b.** 63 ÷ 3 =
c. 92 ÷ 4 =	**d.** 90 ÷ 5 =
e*. 144 ÷ 6 =	**f*.** 216 ÷ 4 =
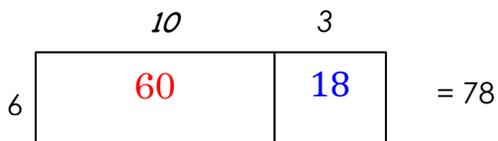
Solve the problems below using any strategy.

a. 78 ÷ 6 =	**b.** 39 ÷ 3 =
c. 84 ÷ 4 =	**d.** 75 ÷ 5 =
e*. 186 ÷ 6 =	**f*.** 128 ÷ 4 =

Measurement

a. What time is showing on the clock?

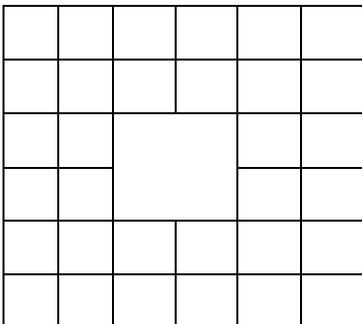It is _____

In 1 hour and 15 minutes it will be: _____

b. Measure the line segment below to the nearest quarter inch.

The line is _____.

The line is _____.

c. What is the area of the figures below?

_____

_____
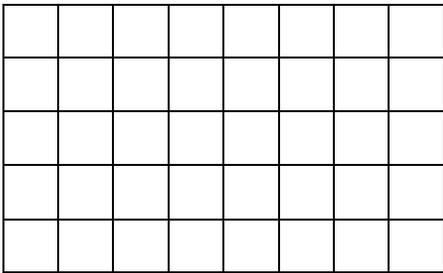
Measurement

a. What time is showing on the clock?

It is _____ In 73 minutes it will be: _____

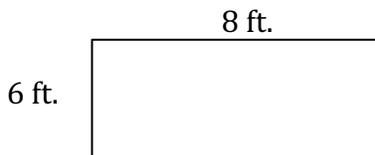**b.** Measure the line segment below to the nearest quarter inch.
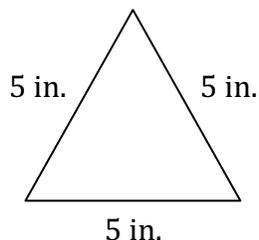
The line is _____.

The line is _____.

c. Find an item 4 ½ inches long. What is it?_____

d. Find an item 12 ¼ inches long. What is it? _____

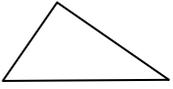
e. How much fence is needed to enclose the garden below?

8 ft.

6 ft.

f. What is the perimeter of the shape below? _____

5 in.   5 in.

5 in.

16

Geometry

Label the 2-D shapes:

_____   _____

_____   _____

_____

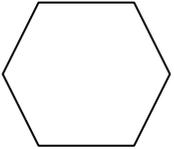**Draw a rectangle:** _____

Describe the similarities and differences between a square and a rhombus.

_____

_____

What makes a rectangle, a rectangle?

_____

_____