Dear Parents,

Each student is expected to engage in fun and consistent math practice throughout the summer to avoid the summer slide. Brains need rest too, however, so don’t forget to have fun!

**Summer Work Expectations and Guidelines:**
1. Practice the multiplication facts consistently.
2. Spend time on DreamBox each week.
3. Print out this packet. If you don’t have access to a printer, you may pick up a hard copy at school. The student work portion is due the first day of school to next year’s teacher.

   - 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. Particular areas of strength and growth are noted in your child’s report card.
   - 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.
   - The pencil and paper portion includes some questions that are from the next grade level. Do not worry if your child has difficulty or hasn’t mastered these extensions.

**Suggested Schedule:**
Weekly: DreamBox and 1-2 pages from this packet. The first page is open-ended problems and should be spread throughout the summer, with the suggestion of solving 1 – 2 problems/week. Multiplication and division facts should be practiced consistently!

**Recommended Resources:**
Table Talk Math: a book and an account on Instagram
Bedtime Math: a resource for parents to do with their child
The Opposite of Spoiled by Ron Leiber

**Family Activities:**
- Involve your child in your shopping experiences. While we love to use our debit and credit cards, find time to allow your child to pay with cash. Other activities include estimating the total cost of the purchase, deciding between items based on price or wants, and calculating the change.
- 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, Prime Climb, Blokus, Monopoly, Parcheesi, Mancala, Chess, 24, Muggins! Games
- Measure, cook and bake with your child!
- Involve your child in calculating distance traveled, time spent traveling and make the “Are we there yet?” into a math problem!
Resources to Practice Computation and Fact Fluency

Create and Print Worksheets:  http://www.mathfactcafe.com/ or math-aids.com

Free websites:

<table>
<thead>
<tr>
<th>Name</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greg Tang Math</td>
<td>gregtangmath.com</td>
</tr>
<tr>
<td>Calculation Nation</td>
<td><a href="http://calculationnation.nctm.org/">http://calculationnation.nctm.org/</a></td>
</tr>
<tr>
<td>Illuminations</td>
<td><a href="http://illuminations.nctm.org/">http://illuminations.nctm.org/</a></td>
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</tbody>
</table>

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
- Gate

Puzzles, logic, enrichment and problem-solving apps:

- Math Munch: https://mathmunch.org/
- Sumaze: http://mei.org.uk/sumaze
- 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.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Record a number sequence of at least ten numbers where each number is three less than the previous number.</td>
</tr>
<tr>
<td>b.</td>
<td>Sarah ate $\frac{1}{4}$ of the cherries in her snack box. How many cherries might have been in Sarah's snack box? How many might she have eaten?</td>
</tr>
<tr>
<td>c.</td>
<td>Sam rolled two dice and multiplied the results. He got a product that was an even number. What numbers might Sam have rolled?</td>
</tr>
<tr>
<td>d.</td>
<td>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?</td>
</tr>
<tr>
<td>e.</td>
<td>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?</td>
</tr>
<tr>
<td>f.</td>
<td>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.</td>
</tr>
<tr>
<td>g.</td>
<td>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.</td>
</tr>
<tr>
<td>h.</td>
<td>Using all of the digits 4, 5, 6, 7, 8, 9 and any operation (add, subtract, multiply, divide), what numbers can you make?</td>
</tr>
<tr>
<td>i.</td>
<td>I subtracted a three-digit number from a three-digit number and got a correct answer of 249. What might the two numbers be?</td>
</tr>
<tr>
<td>j.</td>
<td>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.</td>
</tr>
<tr>
<td>k.</td>
<td>Draw two different quadrilaterals. How are these shapes alike? How are they different?</td>
</tr>
<tr>
<td>l.</td>
<td>Three friends shared two pizzas equally. How much of the pizza did each person get? Explain your thinking.</td>
</tr>
<tr>
<td>m.</td>
<td>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.</td>
</tr>
<tr>
<td>n.</td>
<td>Choose two 3-digit numbers less than 500. Write and solve an addition and a related subtraction number story using these numbers.</td>
</tr>
<tr>
<td>o.</td>
<td>Choose two of the following: $_ \times _ = 36$ $_ \times _ = 54$ $_ \times _ = 72$ How many different pairs of numbers can you use to fill the blanks? What are they?</td>
</tr>
<tr>
<td>p.</td>
<td>The answer to a division question is 3. What might the question be? Record as many different solutions as you can.</td>
</tr>
</tbody>
</table>
Place Value
Write the numerals below in expanded form.

748 = _____________________________________________

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:

<table>
<thead>
<tr>
<th>1,804</th>
<th>13,328</th>
</tr>
</thead>
<tbody>
<tr>
<td>to the nearest 10 _______</td>
<td>to the nearest 10 _______</td>
</tr>
<tr>
<td>to the nearest 100 _______</td>
<td>to the nearest 100 _______</td>
</tr>
<tr>
<td>to the nearest 1,000_______</td>
<td>to the nearest 1,000_______</td>
</tr>
</tbody>
</table>
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  \( \square \) 44,962  

b. 5,291  \( \square \) 2,291

*c. 349,899  \( \square \) 350,125  

d. 199 + 102  \( \square \) 201 + 99

Rounding numbers:

<table>
<thead>
<tr>
<th>( \text{5,314} )</th>
<th>( \text{*25,695} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>to the nearest 10 _________</td>
<td>to the nearest 10 _________</td>
</tr>
<tr>
<td>to the nearest 100 _________</td>
<td>to the nearest 100 _________</td>
</tr>
<tr>
<td>( \square )</td>
<td>( \square )</td>
</tr>
<tr>
<td>( \text{to the nearest 1,000} )</td>
<td>( \text{to the nearest 1,000} )</td>
</tr>
</tbody>
</table>
Addition and Subtraction

Solve the problems below using any efficient strategy.

\[
\begin{align*}
324 & + 219 & + 612 & + 288 & + 4,985 & + 1,429 \\
612 & + 288 & & & & \\
4,985 & + 1,429 & & & & \\
852 & - 361 & - 749 & - 392 & - 811 & - 352 \\
4,291 & - 2,109 & & & & \\
6,355 & - 3,179 & & & & \\
\end{align*}
\]
Addition and Subtraction

Solve the problems below using any efficient strategy.

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>643</td>
<td>+ 238</td>
<td>2,516</td>
</tr>
<tr>
<td>5,763</td>
<td>- 3,241</td>
<td>2,843</td>
</tr>
<tr>
<td>2,238</td>
<td>- 1,125</td>
<td>3,426</td>
</tr>
</tbody>
</table>
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* 5

20

7

3

?  

? 

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 = _______

<p>| a. 32 x 10 = _____ | b. 10 x 40 = _____ |
| c. 64 x 100 =_____ | d. 9 x 100 = _____ |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Division</strong></td>
<td></td>
</tr>
<tr>
<td><strong>a.</strong> 42 ÷ 6 =</td>
<td><strong>b.</strong> 27 ÷ 3 =</td>
</tr>
<tr>
<td><strong>c.</strong> 24 ÷ 8 =</td>
<td><strong>d.</strong> 60 ÷ 5 =</td>
</tr>
<tr>
<td><strong>e.</strong> 56 ÷ 8 =</td>
<td><strong>f.</strong> 36 ÷ 4 =</td>
</tr>
<tr>
<td><strong>e.</strong> 63 ÷ 7 =</td>
<td><strong>f.</strong> 35 ÷ 5 =</td>
</tr>
<tr>
<td><strong>g.</strong> 54 ÷ 9 =</td>
<td><strong>h.</strong> 32 ÷ 8 =</td>
</tr>
<tr>
<td><strong>i.</strong> 60 ÷ 10 =</td>
<td><strong>j.</strong> 20 ÷ 4 =</td>
</tr>
<tr>
<td><strong>k.</strong> 24 ÷ 6 =</td>
<td><strong>l.</strong> 18 ÷ 6 =</td>
</tr>
</tbody>
</table>
Solve the problems below using any strategy. Don’t forget to use multiplication to help you!

**Example:** $78 \div 6 =
(Multiplying up and/or using an array)

Step 1: $6 \times 10 = 60$
Step 2: 18 more is needed & $6 \times 3 = 18$
so $6 \times 13 = 78$

or

<table>
<thead>
<tr>
<th></th>
<th>10</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>60</td>
<td>18</td>
</tr>
</tbody>
</table>

**b.** $63 \div 3 =

**c.** $92 \div 4 =

**d.** $90 \div 5 =

**e*.** $144 \div 6 =

**f*.** $216 \div 4 =
Solve the problems below using any strategy.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a. $78 \div 6 =$</td>
<td>b. $39 \div 3 =$</td>
</tr>
<tr>
<td>c. $84 \div 4 =$</td>
<td>d. $75 \div 5 =$</td>
</tr>
<tr>
<td>e*. $186 \div 6 =$</td>
<td>f*. $128 \div 4 =$</td>
</tr>
</tbody>
</table>
Fractions

1. What fraction of the figure below is shaded? Write two fractions that show how much of the figure is shaded.

[Diagram of a figure divided into sections, some shaded and some unshaded]

2. Shade the figure below to show $\frac{3}{4}$.

[Diagram of an unshaded figure]

3. Use $<$, $>$, or $=$ to compare the fractions below.

a. $\frac{4}{5} \quad \frac{3}{5}$

b. $\frac{2}{6} \quad \frac{2}{7}$

c. $\frac{1}{5} \quad \frac{3}{4}$

4. Explain how you know which is bigger in c.

_______________________________________________________________________

_______________________________________________________________________
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?

**f.** What is the perimeter of the shape below? ____________________________
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?

_____________________________________________________________________
_____________________________________________________________________