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:
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 4th grade curriculum. It is expected that the students are entering into 5th 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, s/he will lose some very important concepts. This packet should be spread out, repeated or tweaked along the way 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 difficultly, or hasn't mastered these extensions.

Suggested Schedule:
Weekly: 1 – 2 pages from this packet. Multiplication and division facts should be practiced consistently!

Parents: You have homework too!
Recommended Books and Resources:
Jo Boaler's Parent Resources: Jo Boaler's Youcubed.org from Stanford University
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, and perseverance. These are widely overlooked but critical to developing a strong mathematician.
    - Good games: Blokus, Monopoly, Parcheesi, Sorry, Mancala, Chess
- 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 for fact fluency and word problems:
Create and Print Worksheets: http://www.mathfactcafe.com/
Word Problem Generator: gregtangmath.com

You will NOT Be graded on accuracy!

Recommended Websites and Apps

Free websites:

Name	Website
Greg Tang Math	gregtangmath.com
Calculation Nation	http://calculationnation.nctm.org/
Illuminations	http://illuminations.nctm.org/
Mathbreakers	https://mathbreakers.com
Addition & Subtraction Math Magician	http://www.oswego.org/ocsd-web/games/Mathmagician/mathsadd.html http://www.oswego.org/ocsd-web/games/Mathmagician/mathssub.html
Fact Monster (flashcards)	http://www.factmonster.com/math/flashcards.html

Khan Academy http://www.khanacademy.org

Websites that require a subscription:

Name	Website	Description
DreamBox	dreambox.com	An adaptive, individualized learning website.
ixl	www.ixl.com	A website that provides practice with topics organized by grade level or by standard (check privacy policy)

Apps:

- 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

Name: _____

Understanding Place Value

1. Write the numbers in expanded form.

35,109 = _____

824,018 = _____

1,492,345 = _____

To continue & extend: make up any 5 – 10 digit number and practice writing it in expanded form.

2. Write the numbers in standard (number) form.

10,000 + 3,000 + 20 + 8 = _____

700,000 + 30,000 + 8,000 + 100 + 60 + 2 = _____

2,000,000 + 400,000 + 10,000 + 3,000 + 500 + 50 + 1 = _____

3. Use >,<, or = to compare the following numbers:

109,194 _____ 190,841 63,123 _____ 62,323 1,321,670 _____ 2,321,670

0.48 _____ 0.41 0.17 _____0.017 0.98 _____ 0.891

4. Susan says that 0.891 is greater than 0.98 because 891 is greater than 98. Is she correct? Explain your reasoning.

_____

_____

Rounding Numbers

a.

65,809

Rounded to the nearest 10: _____

Rounded to the nearest 100: _____

Rounded to the nearest 1,000: _____

Rounded to the nearest 10,000: _____

b.

312,952

Rounded to the nearest 10: _____

Rounded to the nearest 100: _____

Rounded to the nearest 1,000: _____

Rounded to the nearest 10,000: _____

Rounded to the nearest 100,000: _____

c.

2,152,091

Rounded to the nearest 10: _____

Rounded to the nearest 100: _____

Rounded to the nearest 1,000: _____

Rounded to the nearest 10,000: _____

Rounded to the nearest 100,000: _____

Rounding Numbers

a.

25,910

Rounded to the nearest 10: _____

Rounded to the nearest 100: _____

Rounded to the nearest 1,000: _____

Rounded to the nearest 10,000: _____

b.

541,042

Rounded to the nearest 10: _____

Rounded to the nearest 100: _____

Rounded to the nearest 1,000: _____

Rounded to the nearest 10,000: _____

Rounded to the nearest 100,000: _____

c.

1,919,895

Rounded to the nearest 10: _____

Rounded to the nearest 100: _____

Rounded to the nearest 1,000: _____

Rounded to the nearest 10,000: _____

Rounded to the nearest 100,000: _____

Addition and Subtraction

Solve the problems below.

$\begin{array}{r} 61{,}285 \\ +\ 23{,}782 \\ \hline \end{array}$	$\begin{array}{r} 564{,}291 \\ +\ 495{,}863 \\ \hline \end{array}$
$\begin{array}{r} 45{,}295 \\ -\ 16{,}179 \\ \hline \end{array}$	$\begin{array}{r} 230{,}920 \\ -\ 85{,}695 \\ \hline \end{array}$

Add or Subtract:

$0.52 + 0.83 =$	$0.41 + 0.026 =$	$0.98 - 0.15 =$

Addition and Subtraction

Solve the problems below.

$\begin{array}{r} 75{,}392 \\ +\ 24{,}901 \\ \hline \end{array}$	$\begin{array}{r} 471{,}568 \\ +\ 280{,}455 \\ \hline \end{array}$
$\begin{array}{r} 45{,}295 \\ -\ 26{,}079 \\ \hline \end{array}$	$\begin{array}{r} 670{,}571 \\ -\ 243{,}695 \\ \hline \end{array}$

Add or Subtract Decimals:

0.81 + 0.79 =	0.97 + 0.068 =	12.57 – 0.85 =

Multiplication and Division

1. Listing factors of a number:

List the factors of 24: _____

List the factors of 48: _____

List the factors of 72: _____

2. Multiples of a number:

List the first 6 multiples of 3: _____

List the first 6 multiples of 15: _____

3. True or false:

19 is a prime number. _____ 39 is a prime number. _____

51 is a multiple of 3._____ 54 is a multiple of 4._____

4. Multiplying and Dividing by 10s:

a. 100 x 9 = _____ **b.** 61 x 1,000 = _____

c. 80 x 100 =_____ **d.** 350 x 100 = _____

e. 600 ÷ 100 = _____ **f.** 12,000 ÷ 10 = _____

g. 120,000 ÷ 1,000 = _____ **h.** 84,000 ÷ 100 = _____

Multiplication

152 x 39	264 x 83
591 x 63	321 x 108
257 x 189	551 x 329

Multiplication

$\begin{array}{r} 61 \\ \times\ 55 \\ \hline \end{array}$	$\begin{array}{r} 352 \\ \times\ 27 \\ \hline \end{array}$
$\begin{array}{r} 125 \\ \times\ 83 \\ \hline \end{array}$	$\begin{array}{r} 442 \\ \times\ 256 \\ \hline \end{array}$
$\begin{array}{r} 481 \\ \times\ 67 \\ \hline \end{array}$	$\begin{array}{r} 675 \\ \times\ 318 \\ \hline \end{array}$

Divide using any efficient strategy.

272 ÷ 4 =	420 ÷ 12 =
1,266 ÷ 6 =	1,518 ÷ 3 =

Continue and extend:

930 ÷ 15 =	1,575 ÷ 21 =

Divide using any efficient strategy.

$424 \div 4 =$	$780 \div 12 =$
$1{,}080 \div 8 =$	$960 \div 32 =$

Continue and extend:

$990 \div 18 =$	$2{,}295 \div 51 =$

Solving Story Problems

a. They are serving hot dogs at the end of year party. Hot dogs are sold in packs of 8. If they want to have one hot dog for each of the 63 guests, how many packs of hot dogs do they need to buy?

b. The candy from the estimation jar is being shared equally between the 21 2nd grade students. There are 120 skittles to share. How many skittles does each student get?

c. At the bake sale Sharif and his 3 friends bought 5 bags of cookies that had 6 cookies in each bag. If they shared the cookies equally, how many cookies did each person get?

d. Caro and her grandmother were celebrating their birthdays. Caro's grandmother is 7 times older than Caro. Caro's grandmother is 63 years old. How old is Caro?

Solving Story Problems

a. The kindergarten read 8 times more books than the 3rd grade. The 3rd grade read 25 books. How many books did the two grades read altogether?

b. There are 58 cookies to share between 4 classes. How many cookies does each class get if they share the cookies equally?

c. Charlie was saving money for a new scooter. He needed $225 dollars. He saves $24 per week. After 6 weeks, does he have enough money for the scooter? If not, how many more weeks does he need to save?

d. Lila had a rock collection. She had 117 rocks in her collection. She gave 57 of them to her brother and then shared the rest of them equally with her 4 friends. How many rocks did each friend receive?

Fractions

1. Which fraction is bigger? $\frac{3}{6}$ or $\frac{2}{3}$

Explain how you know:

2. Which fraction is bigger? $\frac{2}{7}$ or $\frac{3}{4}$

Explain how you know:

3. Order the fractions from least to greatest: $\frac{2}{3}, \frac{5}{6}, \frac{1}{2}, \frac{4}{5}, 1\frac{1}{3}, \frac{8}{7}$

4. Find at least one equivalent fraction for each fraction below:

$\frac{1}{2} =$ _____ $\frac{1}{5} =$ _____ $\frac{2}{3} =$ _____

5. Add or subtract:

a. $\frac{2}{7} + \frac{5}{7} =$ _____ b. $\frac{3}{5} - \frac{1}{5} =$ _____ c. $\frac{3}{4} + \frac{1}{8} =$ _____

Fractions

1. Which fraction is bigger? $\frac{3}{5}$ or $\frac{1}{3}$

Explain how you know:

2. Which fraction is bigger? $\frac{6}{7}$ or $\frac{3}{4}$

Explain how you know:

3. Order the fractions from least to greatest: $\frac{4}{3}, \frac{2}{6}, \frac{3}{6}, \frac{4}{5}, 1\frac{2}{3}, \frac{1}{6}$

4. Find at least one equivalent fraction for each fraction below:

$\frac{3}{9} =$ _____ $\frac{2}{5} =$ _____ $\frac{5}{7} =$ _____

5. Add or subtract:

a. $\frac{1}{6} + \frac{5}{6} =$ _____ b. $\frac{3}{4} - \frac{1}{4} =$ _____ c. $\frac{1}{2} + \frac{3}{8} =$ _____

