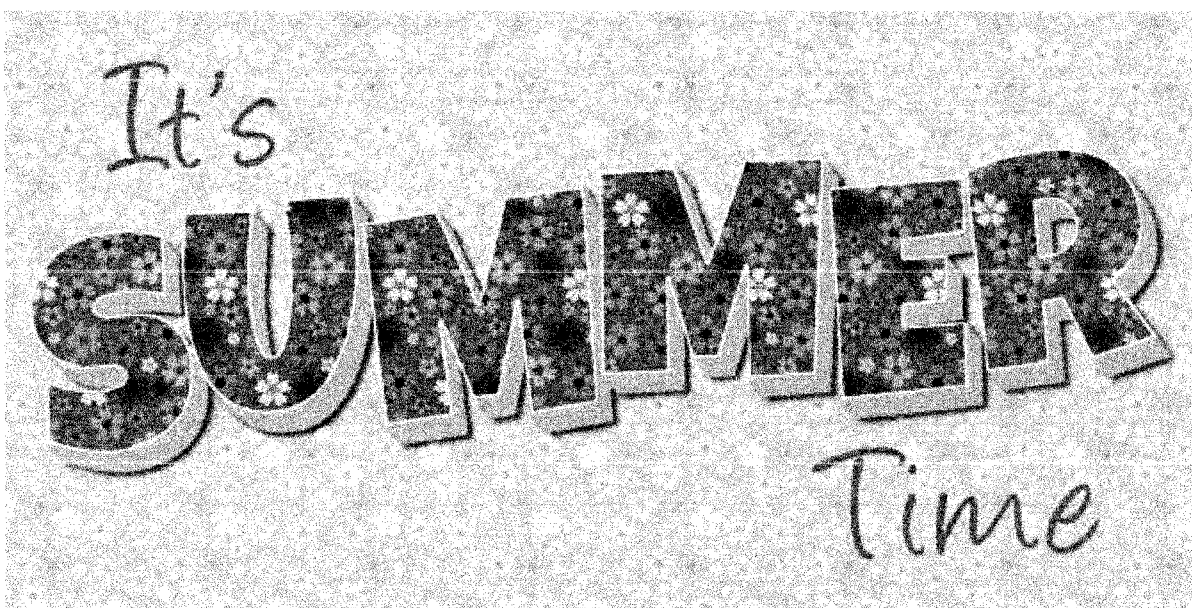


Name: \_\_\_\_\_

Hillers Elementary

**Math Summer Packet**  
for Students  
Entering 4th Grade



**3rd Grade Teacher:** \_\_\_\_\_

**4th Grade Math Teacher:** Mr. Gonzalez

Dear students and families,

It is important for students to review math skills during the summer months. The following activities will reinforce 3rd grade math concepts and help prepare them for the first few months of 4th grade math. This packet will be collected and graded by Mr. Gonzalez (4th grade math teacher) during the first week of school in September.

**Most important of all, I need students to enter 4th grade completely knowing all multiplication facts up to 15. This is perhaps the most important skill needed for 4th grade math success. It will be very difficult to keep pace with the class if the multiplication facts are not mastered when they enter in September.**

Please do not let your child complete the entire packet in one sitting. Students should begin working on their multiplication facts in July, then start the packet in August while they continue memorizing their multiplication facts. Enjoy your summer and I look forward to meeting everyone in September.

Take care,

**Mr. Gonzalez**

4th Grade Math Teacher  
Hiller Elementary School

**Standard:** 4.NBT.A.2 Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using  $>$ ,  $=$ , and  $<$  symbols to record the results of comparisons.

1. **Select all numbers** in which the value of the 7 is 70,000.

- a. 718,403
- b. 178,509
- c. 807,135
- d. 789,260
- e. 987,631
- f. 978,011

2. Write the number 436,089 in expanded form and in word form.

Expanded Form: \_\_\_\_\_

Standard Form: \_\_\_\_\_

\_\_\_\_\_

3. Write a number where the value of the 5 is 10 times the value of the 5 in 152,318.

\_\_\_\_\_

4. Order the following mountain peaks in Colorado from highest to lowest:

Mountain	Height (feet)
Mount Yale	14,199
Grays Peak	14,278
Pikes Peak	14,155
Mount Ouray	13,971

\_\_\_\_\_

\_\_\_\_\_

5. Round the number 569,843 to the:

- a. Nearest thousand: \_\_\_\_\_
- b. Nearest ten thousand: \_\_\_\_\_
- c. Nearest hundred thousand: \_\_\_\_\_

6. Compare the following numbers using  $<$ ,  $>$ , or  $=$ .

a. 324,421 \_\_\_\_\_ 324,241

b. 51,285 \_\_\_\_\_ 5,285

c. 32,001 \_\_\_\_\_ 32,001

7. Write the following numbers in word form.

a. 136,008

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b. 8,032,890

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8. Write the following numbers in expanded form.

a. 4,054

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b. 616,039

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9. Select all of the following that are equivalent to **63,108**.

- a. sixty three million, one hundred eight
- b.  $60,000 + 3,000 + 100 + 8$
- c. sixty three thousand, one hundred eight
- d. sixty three, one hundred eight
- e.  $60,000 + 3,000 + 10 + 8$

10. A school district in Los Angeles reported 633,621 students in 2016. A school district in New York City reported 984,462 students in the same year.

a. Which school district had more students? Explain your reasoning.

b. How many more students? Explain or show your reasoning.

c. How many more students does the school district in New York need to have 1,000,000 students? Explain or show your reasoning.

**Standard: 4.OA.A.1** Interpret a multiplication equation as a comparison, e.g., interpret  $35 = 5 \times 7$  as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.

11. Mike is 3 years old. Joe is 6 times as old as Mike. Which equation shows how to find Joe's age?

- a.  $6 \div 3 = 2$
- b.  $9 - 3 = 6$
- c.  $3 \times 6 = 18$
- d.  $3 + 6 = 9$

12. Which expression is represented by the equation,  $15 \times 5 = 75$  ?
- a. The number 15 is 5 less than 75.
  - b. The number 15 is 5 times as many as 75.
  - c. The number 75 is 15 more than 5.
  - d. The number 75 is 5 times as many as 15.
13. Lucy's Lemonade sold 6 cups of lemonade. Lemon City sold 8 times as many cups of lemonade. Which of the following expressions will help us find how many cups Lemon City sold? Select two expressions.
- a.  $6 \times 8$
  - b.  $6 \div 8$
  - c.  $8 \times 6$
  - d.  $8 \div 6$

**Standard: 4.NBT.B.4** Fluently add and subtract multi digit whole numbers using the standard algorithm.

**Directions:** Find the sum or difference for each of the following. Show your work.

14.  $8,050 - 213 =$  \_\_\_\_\_ 17.  $85,678 + 279 =$  \_\_\_\_\_

15.  $60,000 + 1,984 =$  \_\_\_\_\_ 18.  $765 - 88 =$  \_\_\_\_\_

16.  $176,231 - 2,895 =$  \_\_\_\_\_ 19.  $256,876 - 4,567 =$  \_\_\_\_\_

20. Mr. Bock and Ms. Miller are doing a Science experiment with beakers of water. If beaker A holds 8,768 ml of water and beaker B holds 120,743 ml of water, how many total ml of water will there be when the beakers are combined? Show your work.

**Standard: 4.OA.B.4.** Gain familiarity with factors and multiples. Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite.

21. Select **all** true statements.

- a. 5 is a factor of 35.
- b. 35 is a factor of 5.
- c. 5 is a multiple of 35.
- d. 35 is a multiple of 5.

22. Is 17 a prime number or a composite number? Explain how you know.

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23. What are all of the possible side lengths (factor pairs) of a rectangle with an area of 21 square units?

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24. What are all of the possible side lengths (factor pairs) of a rectangle with an area of 50 square units?

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25. Select **all** of the true statements.

- a. 19 is a prime number.
- b. The only factors of 9 are 1 and itself.
- c. 3 is a factor of 24.
- d. 56 is a multiple of 6.

26. List the factor pairs of each number. Is each number prime or composite? Explain or show your reasoning.

a. 37 : \_\_\_\_\_

b. 27 : \_\_\_\_\_

c. 77 : \_\_\_\_\_

27. Is 29 a prime number or a composite number? Explain or show your reasoning.

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28. Is 27 a prime number or a composite number? Explain or show your reasoning.

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29. Find **all** factor pairs of 84.

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30. If a rectangle is 6 tiles wide, what could be its area? Name three possibilities. Explain or show your reasoning.

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**Standard: 4.NF.2** Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as  $\frac{1}{2}$ . Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols  $>$ ,  $=$ , or  $<$ , and justify the conclusions, e.g., by using a visual fraction model.

31. For each pair of fractions, choose whether the first fraction is  $<$  less than,  $>$  greater than, or  $=$  equal to the second fraction.

a.  $\frac{2}{4}$  \_\_\_\_\_  $\frac{3}{4}$

b.  $\frac{2}{10}$  \_\_\_\_\_  $\frac{1}{5}$

c.  $\frac{7}{8}$  \_\_\_\_\_  $\frac{3}{4}$

32. Order the following fractions from least to greatest.

$$\frac{4}{5} \quad \frac{1}{4} \quad \frac{2}{3} \quad \frac{7}{8} \quad \frac{1}{2}$$


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33. Jada, Kiran, and Lin tried to run as far as possible before they had to stop and rest. Jada ran  $\frac{3}{4}$  of a mile. Kiran ran  $\frac{7}{12}$  of a mile. Lin ran  $\frac{4}{6}$  of a mile. Who ran the farthest before stopping? Explain or show your reasoning.

34. Select **all** fractions that are greater than  $\frac{1}{2}$ , but less than 1.

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

b.  $\frac{1}{3}$

c.  $\frac{5}{4}$

d.  $\frac{5}{6}$

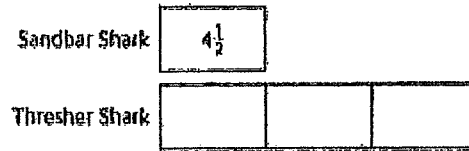
e.  $\frac{1}{4}$

35. Clare walked  $\frac{4}{5}$  of the way around a lake. Tyler walked  $\frac{7}{12}$  of the way around a different lake. Explain why you do not have enough information to determine who walked farther.

**Standard:** 4.NF.B.4 Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers. c. Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem.

36. If each person at a party will eat  $\frac{3}{8}$  of a pound of roast beef and there will be 5 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie? Explain or show your reasoning.
37. Principal Johnson ran  $3\frac{1}{2}$  miles. Her sister ran twice as far. How far did Principal Johnson's sister run? Show your work.
38. Mrs. Tokala uses  $\frac{9}{10}$  of a can of coffee beans each week. How many cans of coffee beans does Mrs. Tokala use in 6 weeks? Show your work.
39. We have 8 cans of pineapple chunks in our pantry. Each can weighs  $\frac{5}{8}$  pound. How much do the cans weigh together? Show your work.

40. Rudi is comparing shark lengths. She read that a sandbar shark is  $4\frac{1}{2}$  feet long. A thresher shark is 3 times as long as that. Use the bar model. How long is a thresher shark?

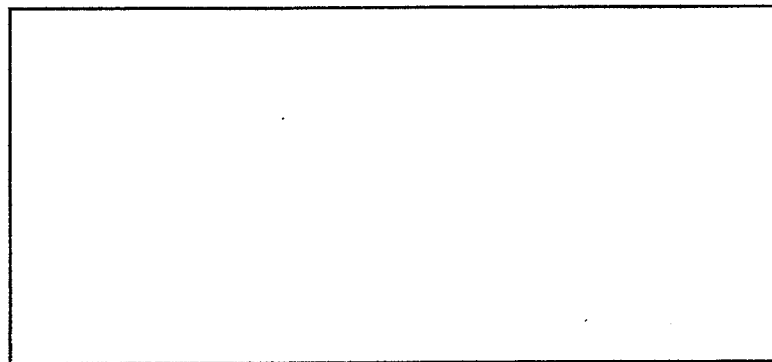


41. Noah and Lin drew different geometric designs on the same-size rectangular paper and colored the designs.

- a.  $\frac{4}{10}$  of Noah's design is blue. How can you describe the size of the fraction?

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- b.  $\frac{5}{12}$  of Lin's design is blue. Sketch an example of what Lin's design could look like.



- c. Whose design has more blue, Noah's or Lin's? Explain or show your reasoning.

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**Standard:** 4.NBT.B.5 Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

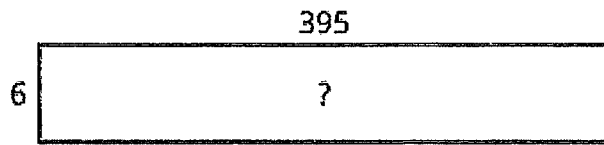
42. To find the value of  $4 \times 36$ , Tyler uses a base-ten diagram, as shown here.



- Where is the 36 in Tyler's diagram?
- Where is the 4 in Tyler's diagram?
- What is the value of  $4 \times 36$ ?

43. Find the value of  $6 \times 83$ . Use a diagram if it is helpful.

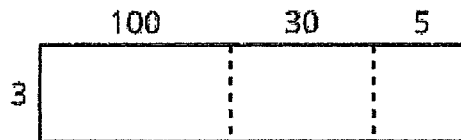
44. What is the area of the rectangle shown below?



45. Here is Noah's work finding the value of  $92 \times 78$ . Do you agree with Noah's work? Explain or show your reasoning.

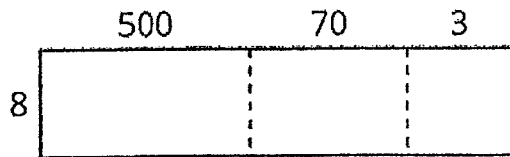
$$\begin{array}{r}
 \begin{array}{r}
 92 \\
 \times 78 \\
 \hline
 16 \\
 720 \\
 \hline
 7200
 \end{array} \\
 + \begin{array}{r}
 630 \\
 \hline
 1,380
 \end{array}
 \end{array}$$

46. Clare drew the following diagram.

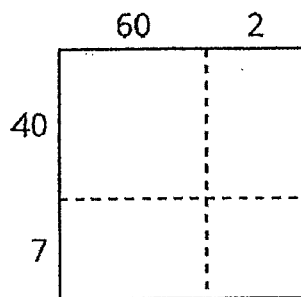


- What multiplication expression can be represented by the diagram?
- Find the value of the expression. Show your work.

47. Use the diagram to find the value of  $573 \times 8$ .



48. Use the diagram to find the value of  $62 \times 47$ .



49. There are 4,218 students in school district A. School district B has 3 times as many students as school district A. How many students are in school district B? Explain or show your reasoning.
50. A leap year has 366 days. A non-leap year (or a common year) has 365 days. How many days are in 3 leap years?