

## Summer Math Reinforcement Packet Students Entering into 4th Grade

Our third graders had a busy year learning new math skills. **Mastery of all these skills is extremely important in order to develop a solid math foundation.** The fourth grade math program will **add onto these third grade skills**, so any time spent learning or reinforcing these concepts will be very beneficial for your child. Each year builds upon the previous year's skills in math. Any areas your child has difficulty, you may want to give them additional practice. **Student mastery of the basic math skills is as important to success in future mathematical procedures and reasoning as learning the alphabet is to reading and writing.**

Please return this completed packet on September 3rd. After your child has completed the math problems and you feel your child is still struggling on a certain concept and needs further practice, please note that on the packet. You can also make up problems of your own for additional practice.

**Reminder - Practicing multiplication (up to 12) and division facts are VERY important!**

Happy Summer ~ see you in September,  
Blessings,

*Miss Buerck*

## THIRD GRADE

### GRADE LEVEL EXPECTATIONS IN MATHEMATICS

When entering fourth grade this is what is expected that your child should already know.

1. Know from memory BASIC FACTS (addition/subtraction/multiplication/division)
2. Know and use times tables through 12 **fluently**.
  - Understand multiplication and division fact families and the inverse relationship of these two operations (just like addition and subtraction). Example:  $3 \times 8 = 24$ , the  $24 \div 8 = 3$  and  $24 \div 3 = 8$ .
  - Can solve  $7 \times \underline{\quad} = 42$  or  $12 \div \underline{\quad} = 4$  using the above inverse relationship between multiplication and division as stated in #9. Example:  $7 \times \underline{\quad} = 42$  think  $42 \div 7 = 6$  so  $7 \times 6 = 42$ .
  - Mentally calculate a product up to a three-digit number (even hundreds) by a one digit number. Example:  $500 \times 3$  ( $5 \times 3 = 15$  then add 2 zeros at the end for 1500) or  $70 \times 4$  ( $7 \times 4 = 28$  then add a zero for 280).
3. Ability to read aloud numbers up to six digits both in numerals and words.
  - Identify the place value of a digit in a number. Example: 3,241, the 2 is in the hundreds place.
  - Recognize and use expanded notation for numbers to 9,999. Example: 2,517 is  $2,000 + 500 + 10 + 7$ ; and 4 hundreds and 2 ones is 402.
  - Know even numbers end in 0, 2, 4, 6, or 8 and odd numbers end in 1, 3, 5, 7, or 9.
4. Add and subtract numbers with regrouping
5. Tell time including elapsed time
6. Know value of coins and ability to total amounts and figure change due
  - Add and subtract money in dollars and cents.
7. Know and use basic math vocabulary
  - Can calculate the perimeter of a square or rectangle. Perimeter is the outer edge; you add the lengths of the 4 sides.
8. Recognize and read basic fractions- halves, thirds, fourths, tenths
  - Understand basic fractions and the terms numerator and denominator.
  - Recognize, name and use equivalent fractions with denominators 2, 4 and 8. Can use fraction strips.
  - Recognize that addition and subtraction of fractions with same denominators. Example  $\frac{3}{4} = \frac{1}{4} + \frac{1}{4} + \frac{1}{4}$
  - When dealing with money, can relate fractions, decimals with dollars. Example:  $\frac{1}{2}$  dollar = \$0.50, fifty cents and;  $\frac{1}{4}$  dollar = \$0.25, one quarter, 25 cents.
9. Be familiar with measurements of length, weight, liquid measure, temperature
  - Use common units of measurements in length, weight, and time. Example: 12 inches = 1 foot; 3 feet = 1 yard; 16 ounces = 1 pound; 60 minutes = 1 hour; 24 hours = 1 day; 12 months = 1 year.
  - Know benchmark temperatures such as freezing ( $32^{\circ}\text{F}$  ,  $0^{\circ}\text{C}$ ); boiling ( $212^{\circ}\text{F}$ ,  $100^{\circ}\text{C}$ ).
  - Know that meters and centimeters are measurement like feet and inches; kilograms and grams are weight like pounds; liters and milliliters are like ounces (capacity of liquid).
10. Read and interpret bar graphs

**Xtra Math is an excellent website for learning and reinforcement of math skills:**

<https://xtramath.org/#/home/index>

**Other games and activities you can play:**

- Take a deck of cards and remove the face cards (kings, queens, jacks). Aces are one. Divide the cards evenly among 2 players. Each player flips over a card. The first one to add the 2 numbers correctly wins the cards. After going through the pile of cards, the player with the most cards wins. You can do a multiplication version also.
- Drill flash cards.
- Follow a recipe/use measurements Handle cash/figure change due Tell time.
- Figure elapsed time/amount of time from start to finish of activity

## TERMS

**Sum:** the answer to an addition problem.

**Difference:** the answer to a subtraction problem.

**Product:** answer to a multiplication problem.

**Quotient:** answer to a division problem.

**Perimeter:** You add up all the sides. (You are adding all lengths of the outer edges together.)

**Median:** Arrange numbers from smallest to largest. What number is in the middle? That is the Median number.

**Mode:** What number occurs most often? This number is the mode.

**Mean:** **Mean** is just another name for average. To find the **mean** of a data **set**, add all the values together and divide by the **number** of values in the **set**.

**Maximum:** Largest number in the set of numbers.

**Minimum:** Smallest number in the set of numbers.

### **Conversion:**

60 seconds = 1 minute

60 minutes = 1 hour

24 hours = 1 day

12 months = 1 year

12 inches = 1 foot

3 feet = 1 yard

10 millimeter = 1 centimeter (approx. 3 ½ centimeters = 1 inch)

100 centimeter = 1 meter

(approx. 1 yard)

## Entering 4<sup>th</sup> Grade Summer Math Packet

First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_

I have checked the work completed: \_\_\_\_\_

Parent Signature

**DO NOT use a calculator when completing this packet.**

1. Write the products: Practice any you do not know quickly.

4	8	11	2	2	7	10	12	6	5	9	5	0
<u>x2</u>	<u>x4</u>	<u>x2</u>	<u>x5</u>	<u>x3</u>	<u>x5</u>	<u>x3</u>	<u>x4</u>	<u>x3</u>	<u>x4</u>	<u>x4</u>	<u>x3</u>	<u>x2</u>

3	9	2	5	7	10	6	5	11	1	4	8	11
<u>x3</u>	<u>x5</u>	<u>x7</u>	<u>x5</u>	<u>x4</u>	<u>x4</u>	<u>x4</u>	<u>x2</u>	<u>x5</u>	<u>x3</u>	<u>x5</u>	<u>x2</u>	<u>x4</u>

6	8	6	3	9	10	12	3	7	4	9	4	12
<u>x5</u>	<u>x4</u>	<u>x2</u>	<u>x4</u>	<u>x3</u>	<u>x2</u>	<u>x3</u>	<u>x5</u>	<u>x3</u>	<u>x4</u>	<u>x2</u>	<u>x3</u>	<u>x2</u>

2. Mrs. Count was born in the year one thousand, nine hundred forty-two. In what year was she born?

- A. 1429
- B. 1492
- C. 1924
- D. 1942

3. Which correctly completes the number sentences?  $53,277 < \underline{\hspace{2cm}}$

- A. 49,999
- B. 50,400
- C. 52,388
- D. 61,003

4. Which number is fifty-two thousand, three hundred nine?

- A. 5,239
- B. 52,039
- C. 52,309
- D. 52,390

5. What is the digit in the ten-thousands place of the number 68,173?
- A. 1
  - B. 6
  - C. 8
6. What is the place value of the 8 in the number 5,280?
- A. ones
  - B. tens
  - C. hundreds
  - D. thousands
7. Which number is equal to 5,912?
- A. 5 hundreds, 9 tens, and 12 ones
  - B. 5 thousands, 91 hundreds, and 12 ones
  - C. 5 thousands, 9 hundreds, and 12 ones
  - D. 5 thousands, 9 hundreds, 1 ten, and 2 ones
8. The number 9,036 is equal to which of the following?
- A.  $900 + 30 + 6$
  - B.  $90 + 30 + 6$
  - C.  $9000 + 30 + 6$
9. Which number means 7 thousands, 4 tens and 5 ones?
- A. 745
  - B. 7,045
  - C. 7,450
10. Which number goes in the blank to make the statement below true?
- $$5,642 < \underline{\hspace{2cm}} < 6,633$$
- A. 6,931
  - B. 5,610
  - C. 6,745
  - D. 5,841
11. When counting by 6's, which of the following patterns is correct?
- A. 0, 6, 12, 16, 22, 28, 34
  - B. 0, 6, 12, 18, 25, 31, 37
  - C. 0, 6, 12, 18, 24, 30, 36
12. What number comes next in this pattern 41, 43, 45, 47, \_\_\_\_\_?
- A. 48
  - B. 49
  - C. 50

13. Which number can be shared in two equal groups with no remainder?
- A. 85
  - B. 490
  - C. 223
14. Martina has a new box of 64 crayons. She drops the box and 17 crayons are broken. How many crayons are **NOT** broken?
- A. 47 crayons
  - B. 57 crayons
  - C. C. 53 crayons
  - D. 81 crayons
15. How much is  $2,470 + 1,423$ ? Show your work.
- A. 1,053
  - B. 3,763
  - C. 3,893
- 16a.  $82$  subtract  $65 =$
- A. 17
  - B. 23
  - C. 27
  - D. 13
- 16b.  $61$  subtract  $18 =$
- A. 52
  - B. 57
  - C. 43
  - D. 47
- 17a.  $80$  subtract  $34 =$
- A. 54
  - B. 46
  - C. 56
- 17b.  $85$  subtract  $64 =$
- A. 19
  - B. 21
  - C. 11
18. How much are  $8,965$  subtracting  $3,525$ ? Show your work.
- A. 5,440
  - B. 5,480
  - C. 6,440
  - D. 12,490
19. The lunchroom serves only hamburgers and pizza on Mondays. Last Monday, 314 students bought a lunch. There were 97 students who bought hamburgers. Which of the following is **closest** to the number of students who bought pizza?
- A. 100 students
  - B. 200 students
  - C. 300 students
  - D. 400 students
20. The best estimate of the sum of 389 and 403 is remember to round:
- A. 600
  - B. 700
  - C. 800
  - D. 900

21. Which division statement is related to  $6 \times 4$ ?
- A. 24 divided by 4
  - B. 64 divided by 4
  - C. 10 divided by 6
  - D. 24 divided by 3
22. The division 354 divided by 6 can be used to solve which of the following problems?
- A. How many school children there will be if 6 new students enroll at a school with 354 students?
  - B. How many school children will there be in a school if 6 students move away from a school with 354 students?
  - C. How many tables for 6 are needed to sit 354 people?
  - D. How many celery plants are planted in 6 rows if each row has 354 plants?
23. There are 36 pieces of gum in a bag. Mom empties the bag by giving 6 pieces to each of her children. How many children does she have?
- A.  $36 \div 6 = 6$  children
  - B.  $36 + 6 = 42$  children
  - C.  $36 \div 9 = 4$  children
  - D.  $36 - 30 = 6$  children
24. A classroom has 5 rows of desks with 5 desks in each row. Which number sentence shows how to figure this out?
- A.  $5 + 5 = 10$  desks
  - B.  $5 \times 5 = 25$  desks
  - C.  $2 \times 5 = 10$  desks
  - D. 5 divided by 5 = 25 desks
25. Which of the following is a true statement?
- A.  $8 \times 2 = 4 \times 4$
  - B.  $1 \times 1 = 1 + 1$
  - C.  $10 \times 3 = 10 + 10$
  - D.  $6 \times 6 = 5 \times 5 + 1$
26. There are 8 socks in Vic's drawer. How many pairs are there?
- A. 2
  - B. 3
  - C. 4
  - D. 16

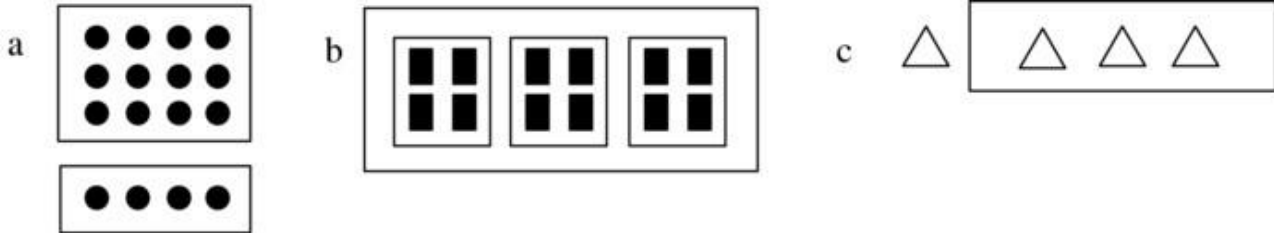


27. Which of the following is true?
- A.  $6 \times 3 = 4 \times 4$
  - B.  $20 - 5 = 19 - 3$
  - C.  $9 + 8 = 10 + 7$
  - D.  $2 \times 3 = 2 + 3$
28. Which multiplication fact can be used to find the answer to  $56 \div 7$ ?
- A.  $7 \times 5$
  - B.  $7 \times 8$
  - C.  $56 \times 7$
29. Susie wants to share 30 candies among 6 friends. How many candies will each friend get?
- A. 8
  - B. 7
  - C. 6
  - D. 5
30. What is the missing number in the problem 54 divided by \_\_\_\_\_ = 6?
- A. 7
  - B. 8
  - C. 9
31. What is the missing number in the problem  $7 \times \underline{\hspace{1cm}} = 56$
- A. 7
  - B. 8
  - C. 9
32. Solve this problem in your head:  $500 \times 6 =$
- A. 300
  - B. 530
  - C. 3000
33. John had exactly 32 pennies. He sorted the pennies into stacks of 5 pennies each. How many pennies were left over?
- A. 37
  - B. 6
  - C. 2
  - D. 0
34. 27 students want to join teams for relay races. Each team must have 4 students. How many complete teams can be made? Would any students be left out, if any?
- A. 5 complete teams with 2 students left out
  - B. 6 complete teams with 3 students left out
  - C. 7 complete teams with 0 students left out

35. May has 10 eggs that she can use to make cookies for the bake sale. Each cookie recipe calls for 3 eggs. How many full recipes can she make and how many eggs will be left over, if any?

- A. 2 full recipes with 4 eggs left over
- B. 3 full recipes with no eggs left over
- C. 3 full recipes with 1 egg left over

36. Which picture represents the equation  $12 \div 3 = 4$ ?



37. A teacher marks 10 of her students' tests every half hour. It takes her one and one half hours to mark all her students' tests. How many students are in her class?

- A. 5
- B. 15
- C. 20
- D. 30

38. What fraction is shown by this strip?



- A.  $\frac{3}{4}$
- B.  $\frac{3}{6}$
- C.  $\frac{3}{7}$

39. Which of these two fractions are equivalent? Draw fraction strips to help you figure this out.

$\frac{1}{2}$     $\frac{2}{4}$     $\frac{3}{8}$

$\frac{1}{2}$

$\frac{2}{4}$

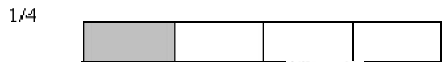
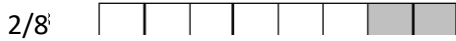
$\frac{3}{8}$

- A.  $\frac{1}{2} = \frac{2}{4}$
- B.  $\frac{1}{2} = \frac{3}{8}$
- C.  $\frac{2}{4} = \frac{3}{8}$

40. Since  $4 \times 10 = 40$ , and  $40 \times 5 = 200$ , then which of the following is true?

- A.  $14 \times 45 = 200$
- B.  $4 \times 10 \times 40 = 200$
- C.  $4 \times 10 \times 5 = 200$
- D.  $40 \times 10 \times 5 = 200$

41. Which two of these fractions are equivalent?



- A.  $\frac{2}{8} = \frac{2}{4}$       B.  $\frac{2}{8} = \frac{1}{4}$       C.  $\frac{2}{4} = \frac{1}{4}$

42. Which set shows fractions ordered from least to greatest? Draw a picture.

A.  $\frac{1}{4}, \frac{1}{2}, \frac{6}{8}$

B.  $\frac{1}{2}, \frac{1}{4}, \frac{1}{8}$

C.  $\frac{1}{2}, \frac{2}{4}, \frac{3}{8}$

43. Which group of fractions is in order from least to greatest? Draw a picture.

A.  $\frac{2}{2}, \frac{3}{8}, \frac{3}{4}$

B.  $\frac{2}{2}, \frac{3}{4}, \frac{3}{8}$

C.  $\frac{3}{4}, \frac{3}{8}, \frac{2}{2}$

D.  $\frac{3}{8}, \frac{3}{4}, \frac{2}{2}$

44. Which set shows fractions ordered from least to greatest? Draw a picture.

A.  $\frac{1}{4}, \frac{1}{2}, \frac{6}{8}$

B.  $\frac{1}{2}, \frac{1}{4}, \frac{1}{8}$

C.  $\frac{1}{2}, \frac{2}{4}, \frac{3}{8}$

45. How many half dollars are there in \$4.50?

- A. 9 half dollars
- B. 18 half dollars
- C. 10 half dollars

46. Ben, Susan, Alex and Tonya each received  $\frac{1}{4}$  of a dollar. How much is that?

- A. \$25
- B. \$.025
- C. \$0.25
- D. \$2.5

47. Eva has \$4.00 to spend on apples. Each apple costs \$0.50. How many apples can Eva buy?  
 A. 2  
 B. 4  
 C. 6  
 D. 8
48. Which coins does 0.50 and 0.25 represent?  
 A. 2 quarters and 2 dimes  
 B. 1 nickel and 1 quarter  
 C. 1 half dollar and 1 quarter  
 D. 5 dimes and 1 nickel
49. Ron, Nita, Donna and David shared \$1.00 equally. What was the exact amount each one received?  
 A. \$0.25  
 B. \$0.30  
 C. \$0.50  
 D. \$0.75
50. Michelle has a string which is 3 feet and 8 inches long and John has a string which is two feet and six inches long. How much longer is Michelle’s string?  
 A. 2 inches  
 B. 10 inches  
 C. 1 foot and 2 inches  
 D. 1 foot and 10 inches
51. \_\_\_\_\_ days in a week                      \_\_\_\_\_ minutes in an hour                      \_\_\_\_\_ ounces in a pound  
 \_\_\_\_\_ months in a year                      \_\_\_\_\_ inches in a foot                      \_\_\_\_\_ seconds in a minute  
 \_\_\_\_\_ hours in a day                      \_\_\_\_\_ feet in a yard                      \_\_\_\_\_ weeks in a year
54. Mike began his bike ride at 2:40 p.m. and finished the ride at 3:20 p.m. How many minutes did Mike ride?  
 A. 20 minutes  
 B. 40 minutes  
 C. 60 minutes
55. What is the date two weeks after June 8?

JUNE						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

- A. June 10  
 B. June 15  
 C. June 22

56. Mary has a piano recital on May 25. Today is April 28. How long must she wait before the recital day?

APRIL						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

MAY						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

- A. 3 weeks 2 days
- B. 3 weeks 6 days
- C. 4 weeks 2 days

57. Joey is meeting Tom at the movies at 1:45. The clock below shows what time it is now. How much time does Joey have to wait before he meets Tom?



- A. 4 hours 45 minutes
- B. 5 hours 20 minutes
- C. 7 hours 20 minutes

58. Kim's little sister just turned 2 years old today. How many months old is her little sister?

- A. 2 months
- B. 12 months
- C. 24 months

59. Eric's disk measures 27 inches. How many feet and inches is that?

- A. 1 foot 3 inches
- B. 2 feet 3 inches
- C. 2 feet 7 inches

60. Which of the following represents the *greatest* length?

- A. 10 inches
- B. 1 ½ inches
- C. 1 ½ feet
- D. 1 foot

61. Which of the following is the shortest measurement?

- A. 1 yard
- B. 2 feet
- C. 26 inches
- D. 1 foot 10 inches

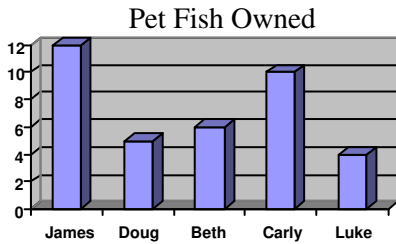
62. Write the products. Any that you do not know quickly, practice.

$$\begin{array}{r} 9 \\ \times 8 \end{array} \quad \begin{array}{r} 7 \\ \times 6 \end{array} \quad \begin{array}{r} 5 \\ \times 9 \end{array} \quad \begin{array}{r} 2 \\ \times 7 \end{array} \quad \begin{array}{r} 6 \\ \times 9 \end{array} \quad \begin{array}{r} 7 \\ \times 7 \end{array} \quad \begin{array}{r} 3 \\ \times 8 \end{array} \quad \begin{array}{r} 4 \\ \times 6 \end{array} \quad \begin{array}{r} 5 \\ \times 9 \end{array} \quad \begin{array}{r} 8 \\ \times 7 \end{array} \quad \begin{array}{r} 3 \\ \times 9 \end{array} \quad \begin{array}{r} 11 \\ \times 7 \end{array} \quad \begin{array}{r} 5 \\ \times 7 \end{array}$$

$$\begin{array}{r} 9 \\ \times 6 \end{array} \quad \begin{array}{r} 2 \\ \times 9 \end{array} \quad \begin{array}{r} 6 \\ \times 7 \end{array} \quad \begin{array}{r} 4 \\ \times 11 \end{array} \quad \begin{array}{r} 5 \\ \times 6 \end{array} \quad \begin{array}{r} 6 \\ \times 8 \end{array} \quad \begin{array}{r} 4 \\ \times 9 \end{array} \quad \begin{array}{r} 8 \\ \times 8 \end{array} \quad \begin{array}{r} 10 \\ \times 8 \end{array} \quad \begin{array}{r} 3 \\ \times 6 \end{array} \quad \begin{array}{r} 7 \\ \times 8 \end{array} \quad \begin{array}{r} 4 \\ \times 7 \end{array} \quad \begin{array}{r} 7 \\ \times 9 \end{array}$$

$$\begin{array}{r} 2 \\ \times 6 \end{array} \quad \begin{array}{r} 3 \\ \times 12 \end{array} \quad \begin{array}{r} 9 \\ \times 9 \end{array} \quad \begin{array}{r} 8 \\ \times 6 \end{array} \quad \begin{array}{r} 2 \\ \times 8 \end{array} \quad \begin{array}{r} 3 \\ \times 6 \end{array} \quad \begin{array}{r} 9 \\ \times 7 \end{array} \quad \begin{array}{r} 7 \\ \times 8 \end{array} \quad \begin{array}{r} 0 \\ \times 9 \end{array} \quad \begin{array}{r} 2 \\ \times 12 \end{array} \quad \begin{array}{r} 5 \\ \times 8 \end{array} \quad \begin{array}{r} 4 \\ \times 9 \end{array} \quad \begin{array}{r} 6 \\ \times 6 \end{array}$$

64. The graph below shows the number of pet fish owned by 5 friends.



What was the minimum number of fish owned by one friend?

- A. 12
- B. 10
- C. 4
- D. 2

What was the maximum number of fish owned by one friend?

- A. 12
- B. 10
- C. 4
- D. 2

65. It took Lily 35 hours to drive from Michigan to Texas. How many days and hours did she drive?

- A. 1 day 11 hours
- B. 1 day 19 hours
- C. 3 days 5 hours

**CONGRATULATIONS!!!** You have completed the summer math packet. You are now ready for 4<sup>th</sup> grade success! Please bring this packet to school on the first day of school. (🌸😊😊)