



Summer Math Learning Packet

Students Entering Grade 4

Get ready to help your child discover how ***Math is All Around Us*** this summer! Just like reading, regular practice over the summer with problem solving, computation, and math facts will maintain and strengthen the mathematic gains you made over the school year.

Inside you will find creative mathematics activities to explore at home. The goal is for you to have fun thinking and working collaboratively to communicate mathematical ideas. While you are working ask how the solution was found and why a particular strategy was chosen.

The packet consists of 2 calendar pages, one for July and one for August, as well as directions for math games to be played at home. Literature and websites are also recommended to explore mathematics in new ways. We encourage you to complete at least 15 math days each month. Keep track of your math in a journal.

Student Accountability

The intention is that your child spends at least 10 minutes a day, 4 to 5 times a week, practicing math. Your child should aim to complete at least 200 minutes of math practice over the course of the summer. When your child has completed the math requirements, please sign and return this paper to the fourth grade teacher with his/her journal.

Parent's signature

Date



Grade 4 Summer Math Ideas

Math

Tools You'll Need:

Notebook for math journal	
Pencil	Dice
Crayons	
Regular deck of playing cards	

DIRECTIONS:

Do your best to complete as many of these summer math activities as you can! Record your work in your math journal every day. In September share your Math Journal with your second grade teacher.

Each journal entry should:

- ✓ Have the date of the entry
- ✓ Have a clear and complete answer
- ✓ Be neat and organized

Here an example of a "Great" journal entry:

Cool Math Books to Read:

The \$1.00 Word Riddle Book by Marilyn Burns

Fraction Fun by David Adler

The Best of Times by Greg Tang

Pigs Will be Pigs: Fun with Math and Money by Amy Axelrod

Games To Play (You will need a deck of cards, with all the face cards removed. Treat the ace as the number 1.)

1. **Multiplication War** - Deal out all the cards equally between 2 or 3 players. Each player turns over 2 cards and multiplies the numbers together. The person with the higher product wins the pile of cards. If you have the same product repeat the procedure. Winner takes all the cards.

2. **Close to 1000** - Deal 8 cards to each player. Use any 6 of your cards to make two 3-digit numbers. Try to get a sum that is close to or equal to 1000. Write these 2 numbers in your journal. Your score is the difference between your number and 1000.

Example: Your eight cards are 1, 5, 4, 3, 1, 8, 3, 8
You can combine $148 + 853 + 1001$. Your score is 1 since the difference between 1001 and 1000 is 1. Discard the 6 used cards and pick 6 new cards. Whoever has the lowest total score after 5 rounds wins the game.

Other games to play: Monopoly, Othello, Battleship, Connect Four, Mastermind, Mancala, Legos, K'Nex, Simon, Yahtzee

Fun Websites to Explore:

HYPERLINK "<http://www.funbrain.com>
HYPERLINK "<http://www.figurethis.org>
HYPERLINK "<http://www.aplusmath.com>
HYPERLINK "<http://www.setgame.com>
HYPERLINK "<http://www.illuminations.nctm.org> Click on K-2 and press SEARCH

August 2017 Entering Fourth Grade Mathematics Calendar*

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1 Read <u>Fraction Fun</u> By David Adler. Which is larger, $\frac{2}{3}$ or $\frac{3}{4}$? How do you know? Prove it.	2 Ask family and friends what their favorite summer activity is. Use a tally chart to collect your data. Make a graph of your choice to show the results.	3 Play <u>Multiplication War</u> . (see direction page)	4 Choose one activity for a day and record the start and stop time. Calculate the elapsed time for the activity. (ex. time you wake up and go to sleep) in (Challenge: convert all of your times into minutes or hours)	5
6	7 Try a new game at www.funbrain.com Challenge yourself.	8 Play the game <u>Close to 1000</u> . (see directions)	9 How many different ways can you make \$3.25? How many quarters can you have if you have \$3.25 in quarters?	10 Practice math facts in a fun way at the website www.multiplication.com What games did you play?	11 Look at how probability is used everyday, such as weather reports. Make a list of things that could: never happen, might happen, and are sure to happen.	12
13	14 Play a game. What strategy did you use? Would you use the same strategy again?	15 Play the <u>Product Game</u> at www.illuminations.nctm.org Record the strategy that you used.	16 Draw a design that has symmetry.	17 Make a data table to record the high temperature for the next 7 days starting today.	18 Write a story problem that can be solved using the number sentence $9 \times 3 = \underline{\hspace{2cm}}$.	19
20	21 What cars are parked on your street? Create a table of the make of cars parked on our street (ex. Honda, Ford...)	22 Read <u>The Best of Times</u> By Greg Tang. Make a set of flash cards and practice the multiplication facts.	23 Play <u>Chairs</u> at www.illuminations.nctm.org If you have 8 tables, what's the greatest number of people you can seat in a line?	24 Play a strategy game. What strategy did you use? Would you use it again?	25 How many different ways can you make \$1.00 using quarters, nickels, and dimes?	26
27	28 Is there a street parallel to your street? Look on a map and find 2 streets that are parallel and 2 streets that are perpendicular to each other.	29 Figure your age in months.	30 Roll 2 dice and multiply to find the <u>product</u> . Record the products. Do this 25 times. Create a bar graph with the results. What do you notice?	31 Read <u>Pigs Will be Pigs: Fun with Math and Money</u> by Amy Axelrod. Get a menu from a restaurant and add up what it would cost for your family to eat there.		

July 2017 Entering Fourth Grade Mathematics Calendar*

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
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	<p>3 Count the change an adult has this morning. Count the change an adult has this evening. What's the difference?</p>	<p>4 HOLIDAY</p>	<p>5 Draw a picture that only uses geometric shapes. Identify as many shapes as possible.</p>	<p>6 Find 4 numbers larger than 1,000 in a newspaper. Put them in order from least to greatest. What is the difference between the smallest and the largest?</p>	<p>7 Play <i>Concentration</i> at www.illuminations.nctm.org Choose cards: <i>fractions</i> games: <i>face down</i> Draw pictures that represent some fractions.</p>	<p>8</p>
<p>9</p>	<p>10 Write multiplication and division combinations for 6, 7, and 42. Can you write a word problem to go with these equations?</p>	<p>11 Select ten items from a grocery flyer and find the total cost of the items. Calculate how much change you would receive from a one hundred dollar bill.</p>	<p>12 Play a game. What strategy did you use? Would you use the same strategy again?</p>	<p>13 How many hours did you sleep last night? Bedtime: _____ Wake time _____</p>	<p>14 Write a word problem whose answer is 12. Have someone solve the problem. Choose another answer and make up a problem.</p>	<p>15</p>
<p>16</p>	<p>17 Play <i>Multiplication War</i>. (see direction page)</p>	<p>18 Write a schedule for tomorrow that includes the hours and minutes of your activities.</p>	<p>19 A farmer has chickens and cows. What combination of animals could total 24 legs? Is there more than one combination?</p>	<p>20 Use the flash cards that you made, and practice your multiplication facts.</p>	<p>21 Gather 3 store receipts. Find the total amount that was spent.</p>	<p>22</p>
<p>23</p>	<p>24 Try a new activity at www.coolmath4kids.com Challenge yourself.</p>	<p>25 Read <i>The \$1.00 Word Riddle Book</i> by Marilyn Burns. What is your name worth? What is the most expensive word you can make?</p>	<p>26 You went shopping with a \$5 bill and spent \$2.40. Is your change more or less than 40 dimes? Prove your answer.</p>	<p>27 Go to the website www.setgame.com Play and enter to win a prize!</p>	<p>28 Have a scavenger hunt for real-world examples of right angles (ex. the corner of a book)</p>	<p>29</p>
<p>30</p>	<p>31 YOU DID IT! Please bring your journal to your fourth grade teacher on the first day of school!</p>					

Create Your Own Summer Math Calendar!

Grade _____

If the activities suggested don't seem to "fit your child" or you have your own websites/literature/math practice you would like to do you can create your own math calendar. Feel free to substitute your own activities that better suit your needs or learning style. All we ask is that you document your created activities below. Remember: the goal is to complete 15 activities each month. You can certainly use this sheet to record more!

#	Date Completed	Description of Math Activity
1		
2		
3		
4		
5		
6		
7		

8		
9		
10		
11		
12		
13		
14		
15		

Students' name: _____

Parent's Signature: _____