



# Summer Math Learning Packet

## *Students Entering Grade 5*

Get ready to discover mathematics all around you 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 fifth grade teacher with his/her journal.

\_\_\_\_\_  
Parent's signature

\_\_\_\_\_  
Date



## Grade 5 Summer Math Ideas

Math Tools You'll Need:

Notebook for math journal	Coins
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 is an example of a "Great" journal entry:

July 5<sup>th</sup>

Today I looked at the weather section of the newspaper and recorded the predicted high temperature for the next 5 days: 82, 88, 90, 76, 81. I rearranged the data from the least to greatest number, then found 82 to be the middle value, which is the median temperature.

#### **Cool Math Books to Read:**

Counting on Frank by Rod Clement

A Grain of Rice by Helena Clare Pittman

Sideways Arithmetic from Wayside School by Louis Sachar

Divide and Ride by Stuart Murphy

Lemonade for Sale by Stuart Murphy

Games To Play (You will need a regular deck of cards)

#### 1. **Multiplication Compare**

Remove all the face cards from a deck of cards. The ace will equal 1. Deal out the cards equally between 2 to 3 players. Each player turns over 2 cards and multiplies the numbers together. The person with the highest product wins all the cards. **Challenge:** each person gets 4 cards and multiplies a 2-digit number by a two-digit number.

#### 2. **Close to 1000**

Deal 8 cards to each player. Use any 6 cards to make two 3-digit numbers. Try to make the sum close to or exactly 1000. For ex. You combine 148 and 853 to make 1001. Your score is 1 because the difference between 1001 and 1000 is 1. The lowest score after five rounds wins!

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

#### **Fun Websites to Explore:**

<http://www.funbrain.com>

<http://www.setgame.com>

<http://www.aplusemath.com>

<http://www.multiplication.com>

<http://www.coolmath4kids.com>

<http://www.mathplayground.com>

<http://www.illuminations.nctm.org> Click on **ACTIVITIES**.

Click on **3-5** and press **SEARCH**.



# July 2010 Entering Fifth Grade Mathematics Calendar

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				<b>1</b> Have a scavenger hunt for real-world examples of parallel lines (ex. railroad tracks)	<b>2</b> Visit the website <a href="http://www.multiplication.com">www.multiplication.com</a> Choose some activities to have fun practicing multiplication. Record choices.	<b>3</b>
<b>4</b>	<b>5</b> Read <i>Lemonade for Sale</i> By Stuart Murphy. Make a graph, by days of the week of the number of dogs you see each day.	<b>6</b> Play the game <i>Close to 1000</i> . (see directions)	<b>7</b> Make a set of flash cards of multiplication facts. Practice your facts with a friend.	<b>8</b> Look at weather in the paper across the nation. Look at the highest temperature and the lowest temperature, What is the difference between them?	<b>9</b> Play the <i>Product Game</i> at <a href="http://www.illuminations.nctm.org">www.illuminations.nctm.org</a>  Record the strategy that you used.	<b>10</b>
<b>11</b>	<b>12</b> Identify and classify angles: acute (less than $90^\circ$ ) obtuse (greater than $90^\circ$ ), right ( $90^\circ$ ) in everyday things (buildings, bridges, furniture...)	<b>13</b> Write down the names and prices of 5 cars you find in the newspaper. Order the prices from least to greatest. Round the prices to the nearest thousand.	<b>14</b> Use 8 straight lines. How can you make 4 triangles and 2 squares?	<b>15</b> Go to the website <a href="http://www.setgame.com">www.setgame.com</a> Play and enter to win a prize!	<b>16</b> Read <i>Divide and Ride</i> by Stuart Murphy. How can 13 children be arranged on a park ride that seats 2, 3, 4, 5? How many kids are left waiting?	<b>17</b>
<b>18</b>	<b>19</b> Play <i>Multiplication Compare</i> . (see directions)	<b>20</b> Play a strategy game. What strategy did you use? Would you use it again?	<b>21</b> Make a paper airplane and fly it. Measure how far it goes. Try a few times. Record distances in your journal.	<b>22</b> PLAY BASEBALL at <a href="http://www.funbrain.com">www.funbrain.com</a>	<b>23</b> Find the area of your bedroom floor. What room in your house could have twice the area of your bedroom? Half the area of your room? Check.	<b>24</b>
<b>25</b>	<b>26</b> Write down the numbers you see on 2 license plates. Create 4 math problems with these numbers.	<b>27</b> Read <i>A Grain of Rice</i> by Helena Pittman. Calculate how many grains of rice she will receive on day 18. How many will she have altogether?	<b>28</b> Visit the game room at <a href="http://www.aplusmath.com">www.aplusmath.com</a>  Record what you played.	<b>29</b> Make a dollar with 50 coins. What coins did you use? How many of each?	<b>30</b> As of today, record the Wins and Losses of the Red Sox this season. Estimate the Wins and Losses at the end of the season. Explain your thinking to an adult.	<b>31</b>

# August 2010 Entering Fifth Grade Mathematics Calendar

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2 Use a newspaper or weather.com and record the forecasted high temperatures for the next 5 days. What is the median for your data?	3 Play a game. What strategy did you use? Would you use that strategy again?	4 Would you rather have your height be made of a stack of nickels or quarters, lined up end to end? How much would you be worth?	5 Visit the website <a href="http://www.mathplayground.com">www.mathplayground.com</a> and play the logic games.  How did you do?	6 Draw a design using symmetry.	7
8	9 Estimate the following in inches: your height; length of your foot; distance from your elbow to the tip of your little finger. Measure to see how close you are.	10 Find a graph in the newspaper or on the computer. Cut and paste it into your journal. Write 3 statements about the graph.	11 <b>Play Close to 1000.</b> (see directions)	12 Play <i>Concentration</i> at <a href="http://www.illuminations.nctm.org">www.illuminations.nctm.org</a> . Choose: <i>fractions, face down</i> . Draw pictures that represent some fractions.	13 Vowels are worth \$50 each, consonants are worth \$40. Can you make a word worth exactly \$200? \$600?	14
15	16 Place a plastic bowl on the floor and stand 20 steps away. Toss a coin in the bowl and record how many times it lands inside it. Express this as a fraction. Repeat.	17 Play <i>Fraction Game</i> at <a href="http://www.illuminations.nctm.org">www.illuminations.nctm.org</a> . How many moves did it take to get all the red markers to the right side? Can you beat your score?	18 Measure the perimeter of two different windows in your home. Find the difference of the perimeters.	19 Flip a coin 25 times. Make a tally chart for how many times it lands on heads or tails. Write a fraction for your head and tail data. Try it again. Were the results the same?	20 Write a word problem whose answer is 154. Have someone solve the problem.	21
22	23 List some capital letters (E, F...) that have one pair of parallel lines. Are there any that have two pair of parallel lines?	24 Make the largest and smallest numbers you can find using the digits 4, 1, 7, 8, and 2. Find their difference and sum.	25 Try a new activity at <a href="http://www.coolmath4kids.com">www.coolmath4kids.com</a> . Challenge yourself. What did you choose to do?	26 Survey 10 friends or relatives to find out their favorite outdoor activity. Graph the results.	27 Go on a 3-D scavenger hunt. How many cylinders, pyramids, cubes, rectangular prisms and cones can you find today? Organize your data.	28
29	30 Play the <i>Product Game</i> at <a href="http://www.illuminations.nctm.org">www.illuminations.nctm.org</a> . Record the strategy that you used.	31 <b>YOU DID IT!</b> Please bring your journal to your fifth grade teacher on the first day of school!				