



Summer Math Learning Packet

Students entering Grade 6

The daily activities in this summer math packet will review math concepts and skills of the grade that has just been completed during the 2014-2015 school year. Just a few minutes each day spent “thinking and talking math” will help reinforce the math that has been learned and begin to bridge the foundation for extending to the concepts that will be developed next year. 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 math practice in this summer packet address the new Massachusetts Curriculum Framework for Mathematics which incorporates the Common Core Standards addressing these 3 critical areas in grade 5:

- (1) developing fluency with addition and subtraction of fractions, and developing understanding of the multiplication of fractions and of division of fractions in limited cases (unit fractions divided by whole numbers and whole numbers divided by unit fractions)
- (2) extending division to 2-digit divisors, integrating decimal fractions into the place value system and developing understanding of operations with decimals to hundredths, and developing fluency with whole number and decimal operations
- (3) developing understanding of volume.

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, worksheets, APPs 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

I spent at least 10 minutes a day, 4 to 5 times a week, practicing math. I completed at least 250 – 300 minutes of math practice over the course of the summer. I recorded my minutes on the tracking sheet. I returned the recording sheet to my 6th grade math teacher. I also showed my teacher my journal where I kept track of my mathematical thinking.

Student Signature

Date

Websites

Here are websites that you can access at the **Cambridge Public Library** if you do not have a computer at home. You can record your choices on the "Create Your Own Summer Math Calendar!" sheet provided.

<http://www.figurethis.org/index.html>

<http://mathforum.org/index.html>

<http://www.coolmath4kids.com/>

<http://www.figurethis.org/index.html>

<http://mathplayground.com/>

<http://illuminations.nctm.org/activitysearch.aspx>

APPS to Practice Math!

Try handing your smartphone or iPad to your child while you are driving or watching TV and let them practice their math on a free or inexpensive app.

<u>APPS for 3 - 5</u>	<u>APPS for all Grades</u>
Everyday Mathematics, Beat the Computer, Multiplication	Fast Math
Everyday Mathematics, Divisibility Dash	Fast Math Challenge HD
Everyday Mathematics, Equivalent Fractions	Fraction App by Tap to Learn
Juicy Math – Multiplication and Division	Kakooma
Motion Math HD	Math Matrix HD
Pizza Fractions: Basic Conversions	Quick Math Game
Pizza Fractions: Comparing Simple Fractions	PopMath
Times Tables	iEstimation
Tony's Fraction's Pizza Shop	Pick-a-Path
Pearl Diver 3 - 8	Sumdog
	Conundra Math

Websites to Explore:

The Math Forum-The Math Forum includes a wonderful Student Center which allows students to choose resources and grade level material they find challenging or interesting. A help area called Ask Dr. Math, an Internet Math Hunt, and Math Tips & Tricks, which includes "BeatCalc", are just a few of the wonderful resources.

Cool Math For Kids- This website provides a variety of games that explore probability and "race the clock" which allows you to practice basic computation skills. There are also several IQ games and brain thinkers that foster your ability to think logically.

The Quiz- This website provides math activities listed by concept and skills for all grade levels.

Math Playground- An action-packed site for middle school students to practice math skills, play a logic game and have some fun.

Math Illuminations, National Council of Mathematics-Choose a grade range to access activities and games.

Figure this- This site is designed to challenge middle school students with real world challenges.

Kids.Gov- This website is the official kids' portal for the U.S. government. It is divided into educational subject like Arts, Math, and History.

<http://www.kids.gov/>

Great Math Books to Read:

A Gebra Named Al by Windy Isdell

Math Curse by Jon Scieszka

Chasing Vermeer by BlueBalliett

Sir Cumference & the Dragon of Pi by Cindy Neuschwander

Sir Cumference & the First Roundtable by Cindy Neuschwander

Sir Cumference & the Great Knight of Angleland by Cindy Neuschwander

Sir Cumference & the Sword in the Cone by Cindy Neuschwander

Number Devil: A Mathematical Adventure by Hans Magnus Enzensberger

Counting on Frank by Rod Clement

Guinness Book of Records by Time Inc

Mathematicians are People Too by Luetta Reimer & Wilbert Reimer

These resources are intended for you to choose the websites and books that are most interesting to you. Keep in mind that it will be beneficial for you to:

- Solve problems involving addition, subtraction, multiplication and division of fractions.
- Solve problems involving addition, subtraction, multiplication, and division of decimals.
- Convert fractions, decimals, and percents to find equivalent fractions.
- Solve a variety of problems to strengthen your mathematical skills and knowledge.

July 2015 Entering Sixth Grade Mathematics Calendar

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			<p>1 286,489 is an odd number. How many times greater is the 8 in the ten thousands place than the 8 in the tens place? Explain your thinking</p> <hr/>	<p>2 A box 2 centimeters high, 3 centimeters wide, and 5 centimeters long can hold 40 grams of clay. A second box has twice the height, three times the width, and the same length as the first box. How many grams of clay can it hold?</p>	<p>3 Six friends have 4 sandwiches to share. What fraction of a sandwich which each person get?</p>	<p>4 Happy 4th of July!</p>
5	<p>6 Express the number 50 in at least 25 different ways. Use all 4 operations and include fractions and decimals.</p>	<p>7 Write an expression for: <i>Add 2 and 4 and multiply the sum by 3. Next, add 5 to that product and double the result.</i></p>	<p>8 Try a new activity at http://www.coolmath4kids.com/ Challenge yourself. What did you chose to do?</p>	<p>9 On Saturday 3/4 of a 5th grade class went to see a new movie. If 1/2 of the class went to the afternoon session, what fraction of the class went to the evening session?</p>	<p>10 Count cricket chirps for 15 sec. Add 39. This will give you the F. temp outside. Try it on 3 different days. Does it work?</p>	11
12	<p>13 Choose a favorite professional athlete and research his/her annual salary. How much does s/he earn in a month? A day?</p>	<p>14 A rectangle is twice as long as it is wide. Its width is $5\frac{1}{2}$ cm. Find the area of the rectangle.</p> <hr/>	<p>15 The sum of two mixed numbers with unlike denominators is $5\frac{3}{5}$. What might the two mixed numbers be? Show as many different solutions as you can.</p>	<p>16 A California Condor has a 114 inch wingspan. How many feet is that?</p>	<p>17 You have $2\frac{5}{8}$ pizzas to share equally with 3 people. How much pizza will each person get?</p>	18
19	<p>20 Monday through Friday a baker uses $1\frac{1}{4}$ sacks of flour when baking cakes. Will the baker use more than or less than 5 sacks of flour from Monday through Friday?</p>	<p>21 Place parentheses in the following equation to make it true. $6 + 6 \div 6 \times 6 - 6 = 0$</p>	<p>22) Deal 3 cards to make a 3-digit number. Even numbers are whole numbers. Odd numbers are decimals. Repeat this. Add the 2 #s. Turn over 3 new cards per turn. Continue to add the # to last score. Game to 300.</p>	<p>23 Tom built a backyard pen for his new puppy. The length of the pen was $6\frac{1}{4}$ meters and the width was 4 meters. What is the area of the pen?</p>	<p>24 Multiply two fractions together to get the number 1. What do you notice?</p>	25
26	<p>27 Write a story for this problem $2 \div \frac{1}{3}$.</p>	<p>28 .75 is the answer. What could the question possibly be? Challenge yourself to think of more questions.</p>	<p>29 Can you use $\frac{1}{8} \times \frac{2}{5}$ to solve the problem? There is $\frac{2}{5}$ of a pizza left. If Jamie eats another $\frac{1}{8}$ of the original whole pizza, what fraction of the original pizza will be left over? Explain</p>	<p>30 With partner, put 5 cards face up. Turn a 6th card, to be a Target Card. Each player uses the cards to make the Target Card #. All 5 cards must be used only once. Use +, -, x, and/or \div.</p>	<p>31 Use four 4's to create problems that will equal 1-12. Remember to use the correct order of operations to solve your problems: Parentheses, Exponents, Multiply or Divide, Add or Subtract.</p>	1

August 2015 Entering Sixth Grade Mathematics Calendar

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
2	3 Find the sum of the digits of your phone number. What numbers is it divisible by?	4 If you buy 3 books at \$3.95 each, how much change would you get from \$20.00?	5 I am an even, 3 digit palindrome. (ex: 464) The product of the digits is 8. What number am I?	6 Read <u>Guinness Book of Records</u> by Time Inc. What record surprised you the most? Why?	7 Choose a geometry activity at Math Illuminations http://illuminations.nctm.org/activitysearch.aspx	8
8	10 Is a 3 gallon pitcher large enough to hold 25 pints of juice? Explain	11 Play Sudoku from the newspaper How did logic help you to solve the puzzle?	12 How many blades of grass are in a square yard of your backyard? Use logic, measurement, and problem solving strategies to find the answer.	13 Read a book from the suggested " Great Math Books to Read " What new math did you discover?	14 Write a word problem for the equations $1/2 \times 2/3 = X$ Solve it!	15
16	17 There are 3 pizzas. Each child will get 1/4 of a pizza. How many children will get pizza?	18 Find the sum and difference between two decimals. Compare the two decimals using >, =, and < symbols.	19 Visit the website Figure this and look for a real life math challenge. http://www.figurethis.org/index.html	20 Find a fraction or decimal in the newspaper. What did it relate to?	21 If you spend \$100.00 a day, how many days will it take to spend a million dollars? How many years is that? What would you buy?	22
23	24 Have fun with addition magic squares http://www.k-5mathteachingresources.com/support-files/magicsquaresadditionfractions.pdf	25 I am a number less than 50. When divided by 5, my remainder is 4. Who am I? Is there more than 1 correct answer?	26 Evaluate the following numerical expression. $2 \times (5 + 3 \times 2 + 4)$ Can the parentheses in this expression be removed without changing the value of the expression?	27 Jen is 12. Amy is 13. In 25 years, what will be the product of their ages?	28 Leo & Mia are comparing the product of 60×225 to the product of 30×225 . Mia says she can compare these products without multiplying the numbers. Explain how she might do this.	28
30	31 DID IT! Please bring your journal to your sixth grade teacher on the first day of school!					

