



Summer Math Learning Packet

Students Entering Grade 3

The daily activities in this summer math packet will review math concepts and skills of the grade that has just been completed during the 2013-2014 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 4 critical areas in grade 2:

- (1) extending understanding of base-ten notation
- (2) building fluency with addition and subtraction
- (3) using standard units of measure
- (4) describing and analyzing shapes.

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

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 third grade teacher with his/her journal.

Parent's signature

Date



Grade 3 Summer Math Ideas

Math Tools You'll Need:

Notebook for math journal	Coins
Pencil	Dice
Chalk	toothpicks
Regular deck of playing cards	marshmallows

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 third 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 5th
Today I found 3 different ways to make \$1.00. First I used 3-quarters, 2-dimes, and 1-nickel to total \$1.00. Next I had 5-dimes, and 2-quarters and this also totaled \$1.00. Finally I had 2-quarters, 2-dimes, and 6-nickels. These are the three different ways I combined coins to make \$1.00.

Cool Math Books to Read:

Amanda Bean’s Amazing Dream by Cindy Neuschwander
The Greedy Triangle by Marilyn Burns
Measuring Penny by Loreen Leedy
Math for All Seasons by Greg Tang

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

1. **Compare- Addition and Subtraction**

Pass out all the cards to players. Each player flips over two cards. Add or subtract the two numbers showing. Players compare their values and the person with the higher value wins all four cards.

2. **Close to 100**

Deal 6 cards to each player. Use any 4 of your cards to make two 2-digit numbers. (Aces = 1; Jacks, Queens, & Kings = WILD cards, stand for any digit 0-9) Try to make a combination that when added is close to or exactly 100.

5 4 3 A 8 3

You combine 48 and 53 to make 101. Your score is 1 since the difference between 101 and 100 is 1. You make a recording sheet in your journal like this,

Round 1: $48 + 53 = 101$ Score 1

Put the cards you used in the discard pile. Keep the other two for the next round. Pick up four more cards and play 5 rounds. Add the score to each round. The lowest score after 5 rounds wins.

Other games to play: Checkers, Othello, Memory, Set, jigsaw puzzles, Parcheesi, Crazy Eights, Connect Four, Legos, K’Nex.

Worksheets to Practice Math

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

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

July 2014 Entering Third Grade Mathematics Calendar

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		<p>1 100 is the answer, what could the question possibly be? Challenge yourself to think of more questions.</p>	<p>2 Pia was having a party. She put 10 stickers in each party bag. She made 12 bags with ten stickers in each one. How many stickers total were in her 12 bags?</p>	<p>3 Explore one of the recommended website What math did you learn?</p>	<p>4 Holiday</p>	<p>5</p>
6	<p>7 Ask an adult to teach you a card trick. Practice the trick and try it out on a friend. What math was involved?</p>	<p>8 Plant a seed. Will it grow to be about 12 inches or 12 feet? How do you know? Measure and record the height twice a week to keep track of how high it grows.</p>	<p>9 Play a strategy game Othello or Checkers Did your strategy work? Will you try a different strategy the next time you play?</p>	<p>10 $500+60+8$ is a number. Write it as a three-digit number. Write its name in words. Draw a picture to represent the number. Locate it on the number line.</p>	<p>11 You have \$1.50 in your pocket. Make a list of 10 different combinations of coins you could have in your pocket.</p>	12
13	<p>14 Cut out a picture from a magazine or newspaper. Glue it to a piece of paper. Write a story problem to go along with the picture. Challenge a friend to solve it!</p>	<p>15 Find a flower with an odd number of petals. Do all flowers have the same number of petals?</p>	<p>16 Read <i>Measuring Penny</i> by Loreen Leedy Find an animal real or stuffed to measure with inches and centimeters</p>	<p>17 You won first place at a contest! You have two choices for the prize -You can take \$20 home with you today OR \$2 a day for the next 15 days. Which option earns more money? How much more?</p>	<p>18 Add the ages of all the people who live in your house. What is the sum? Is it greater than or less than 100, by how much?</p>	19
20	<p>21 Keep track of the temperature everyday for the week. Draw a bar graph. Compare the difference in temperatures.</p>	<p>22 Using sidewalk chalk write as many number facts you know in one minute.</p>	<p>23 Use all the digits 5, 7, and 2 to create different 3-digit numbers. What is the greatest number? What is the smallest number? How do you know?</p>	<p>24 Find at least 5 different ways to make \$1.00 using nickels, dimes, and quarters.</p>	<p>25 Use $<$, $=$, or $>$ to complete the following number sentences. $657 \underline{\quad} 457+100 + 100$ $923+10 \underline{\quad} 953-10-10-10$ Can you write some?</p>	26
27	<p>28 Read <i>Amanda Bean's Amazing Dream</i> by Cindy Neuschwander Count all of the books in your house.</p>	<p>29 Play Close to 100 (see directions) How does it help you to get better at addition?</p>	<p>30 How many times can you hop on your left foot in a minute? Your right foot? Compare the number of hops using the symbols $<$, $>$ or $=$. What is the difference?</p>	<p>31 How long will it be to your birthday in days? Use a calendar to keep track.</p>		

August 2014 Entering Third Grade Mathematics Calendar

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1 Write the numbers below in expanded form for. (Ex. $583 = 500 + 80 + 3$) 729 846 295	2
3	4 Read, <i>Math for All Seasons</i> by Greg Tang. Make up your own math riddle.	5 Compare and record some three-digit numbers using $>$, $<$ and $=$. Example: $324 > 314$	6 Play Hidden Picture Subtraction www.aplusmath.com	7 Go on a shape hunt for quadrilaterals how many can you find? How are their attributes the same or different?	8 $115 + 6 = 113 + \underline{\quad}$ Copy this problem in your journal and fill in the blank. Explain how you got the answer.	9
10	11 If you start playing a game at 8 a.m. and play for 1 and a half hour, what time is it when you're done? How do you know?	12 Read, <i>The Greedy Triangle</i> by Marilyn Burns. Follow along using toothpicks to make the polygons.	13 Use $<$, $=$, or $>$ to complete the following number sentences. $347 + 30 \underline{\quad} 397 - 10 - 10$ $926 \underline{\quad} 726 + 100 + 10$ Can you write some?	14 Starting with 101, skip count by 100 until you get to 1,001. What pattern do you notice? Try different numbers to start with, does the pattern change?	15 Use a grocery store flyer to plan a breakfast. List all the items you need and record the price of each item. How much will breakfast cost?	16
17	18 Do a Sudoku puzzle in the newspaper.	19 How many ten-dollar bills equal a hundred-dollar bill? Jen had 20 ten-dollar bills. How many hundred-dollar bills can she trade them for?	20 Play Guess My Rule www.mathplayground.com Did you learn new math vocabulary?	21 Estimate how long it will take you to do 100 jumping jacks. Did it take more or less than 5 minutes? Record your time and compare with a friend.	22 Find a bar graph in the newspaper and talk to an adult about what the numbers mean.	23
24	25 Play Building Blocks www.mathplayground.com Describe how you see the shapes fitting together.	26 Stand and jump as far as you can, measure using a yardstick or meterstick. Jump 3 times and compare your measurements?	27 Play Compare (see directions) How does this help you to practice your facts?	28 Write down the years people who live with you were born. Put them in order from least to greatest.	29 YOU DID IT! Please bring your journal to your third grade teacher on the first day of school.	30

Educational and Fun APPS and Websites to Practice Math

Please take some time to do these activities and record your choices on the "Create Your Own Summer Math Calendar!" sheet provided.

Websites

Here are websites that you can access at the **Cambridge Public Library** if you do not have a computer at home

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

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

<http://pbskids.org/cyberchase/math-games/>

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

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

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

<http://bedtimemath.org>

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

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

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

<http://resources.oswego.org/games/mathmagician/cathymath.html>

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 K-2</u>	<u>APPS for all Grades</u>
Adventure Basic School Math	Fast Math
Amazing Coins	Fast Math Challenge HD
Count Money	Fraction App by Tap to Learn
Everyday Mathematics, Addition Top it	Kakooma
Fast Facts Subtraction	Math Matrix HD
Juicy Math	Quick Math Game
Math Bingo	PopMath
Okta's Rescue	iEstimation
Operation Math	Pick-a-Path
Coin Math	Sumdog
Super 7	Conundra Math
Native Numbers PK-K	Cloud Math

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: _____

Grade 3 Answer Key

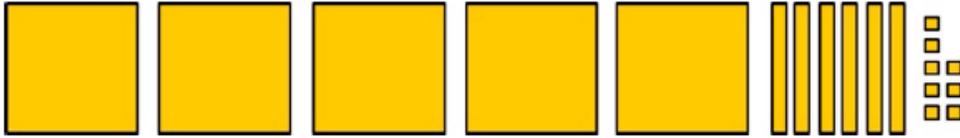
Answers will vary for many of the activities depending on the choices students make. Here are the answers for activities with specific solutions.

July 2

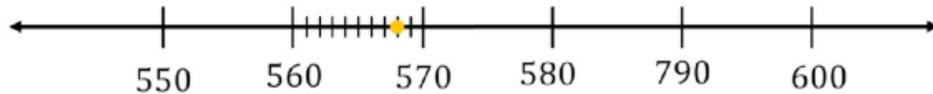
12 groups of ten equals 120 stickers

July 10

$500+60+8 = 568$. The number is five hundred sixty eight. Here is a picture:



Here is is on the number line:



July 11

Examples:

150 pennies

140 pennies and 1 dime

140 pennies and 2 nickels

6 quarters

5 quarters and 25 pennies

4 quarters and 50 pennies

15 dimes

10 dimes and 10 nickels

10 dimes, 5 nickels, 25 pennies

4 quarters, 1 dime, 6 nickels, 10 pennies

July 17

Option 2 is worth \$20.

Option 2 is worth \$30.

Since $\$30 - \$20 = \$10$, Option 2 is worth 10 more dollars than Option 1.

July 23 - The correct answers are 752, 725, 572, 527, 275, and 257.

July 24

Examples:

3 quarters, 1 dime, 3 nickels

2 quarters, 4 dimes, 2 nickels

2 quarters, 3 dimes, 4 nickels

2 quarters, 2 dimes, 6 nickels

2 quarters, 1 dimes, 8 nickels

July 25

Use <, =, or > to complete the following 2 number sentences.

$$657 = 457 + 100 + 100$$

$$923 + 10 > 953 - 10 - 10 - 10$$

August 1

Write the numbers below in expanded form for.

$$729 = 700 + 20 + 9$$

$$846 = 800 + 40 + 6$$

$$295 = 200 + 90 + 5$$

August 8

$$115 + 6 = 113 + \underline{8}$$

The answer is 8 because 113 is 2 less than 115, and 8 is 2 more than 6.

August 11

9:30 a.m.

8 am to 9 am is one hour. 9 am to 9:30 is a half hour.

August 13

Use <, =, or > to complete the following number sentences.

$$347 + 30 = 397 - 10 - 10$$

$$926 > 726 + 100 + 10$$

August 14

101, 201, 301, 401, 501, 601, 701, 801, 901, 1001

I notice that every time I skip count by 100, the digit in the hundreds place increase by 1.

August 19

10 ten-dollar bills equal 1 hundred-dollar bill. Jen can trade 20 ten-dollar bills for 2 hundred-dollar bills.