

# Summer Math Learning Packet

Students Entering Grade 1



The daily activities in this summer math packet will review math concepts and skills of the grade that has just been completed during the 2016 - 2017 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 activities in this summer packet address the new Massachusetts Curriculum Framework for Mathematics which incorporates the Common Core Standards within these 2 critical areas in grade K:

- (1) representing, relating, and operating on whole numbers, initially with sets of objects**
- (2) describing shapes and space. More learning time in kindergarten should be devoted to number than to other topics.**

The packet consists of a week by week “menu of math”, 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 first grade teacher with his/her journal.

Student's Name: \_\_\_\_\_

Parent/Guardian's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

### **Math Tools You'll Need:**

- Notebook for math journal
- Coins
- Pencil
- Dice
- Chalk
- 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 first grade teacher.

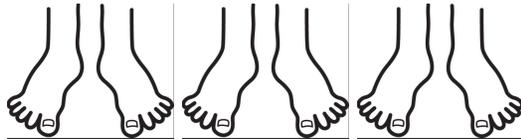
### ***Each journal entry should:***

- 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 counted all the toes in my family. Here is a picture of the toes.



There are 30 toes.  $5 + 5 + 5 + 5 + 5 + 5 = 30$

Worksheets to Practice Math:

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

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

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

Shape, Shape, Shapes by Tana Hoban  
The Secret Birthday Message by Eric Carle  
Ten Black Dots by Donald Crews  
Every Buddy Counts by Stuart Murphy  
The Button Box by Margarette S. Reid

### **Games To Play**

(You will need a deck of cards)

1. Compare: Remove the face cards from a deck of cards.

Remember an Ace is the same as 1. Pass out all cards in the deck among all of the players. Each player flips over one card at the same time. The player with the higher number keeps both cards. If the two cards are the same, turn over another card. The player with the higher number keeps all four.

2. Double Compare: Same as above, but turn over two cards each time and find the sum. The one with the larger sum takes the cards.

3. Close to 10: Remove the face cards from a deck of cards. Deal 3 cards to each player. Which two cards brings you closest to 10? Which player is closest to 10?

Example: You turn over the cards 5, 4, 3 and your opponent turns over an Ace, 8, and 3. You can make 9 (5 and 4) and your opponent can make 9 (Ace and 8) or 11 (8 and 3). It's a tie since you are both 1 away from 10!

*Other games to play:* Checkers, Memory, Chutes and Ladders, jigsaw puzzles, Parcheesi, Fish, Crazy Eights, Candy Land, Blink, Connect Four, Legos, K'Nex.

**Directions:** Each week has five activities for you to complete. You may complete the activities in any order. Choose one activity to do each day, and then write about that activity in your math journal.

### Week 1

1. Use sidewalk chalk to write all the numbers (in order) that you can. (Use paper and pencil if you do not have chalk).
2. Toss ten pennies. How many heads? How many tails? Try again! Did you get the same result?
3. Go to your grocery store. In your shopping cart, practice counting what you see. How many pieces of fruit? How many eggs in a carton?
4. Hop on your right foot and count how many hops you can do! Hop on your left foot. What foot can you do more hops on? Compare.
5. Ask your family which food they would like at a cookout. Which food did people want the most? Which food did people want the least?

### Week 2

1. Count backwards how long it will take you to put on your shoes. For example 20 seconds. 20, 19, 18...
2. Grab a handful of objects. (Pennies, beads, marbles...) Guess how many there are. Count your objects. Were you close to your estimate?
3. Keep track of the weather for one week. How many sunny days? Rainy days? How many more rainy days than sunny days?
4. Count the people that live in your house with you. How many toes do they have altogether? How many fingers?
5. Write your name on a piece of paper. How many letters are there in your name? How many letters are there in the names of all your family?

### Week 3

1. Walk around the house. How many steps does it take you to get around your house. Then try giant steps. Which used more steps?
2. How many jumping jacks can you do in one minute? Is it more or less than 20? How do you know?
3. Read a counting book and then make one of your own. Did you decide to make it counting forward or backwards?
4. Make a picture using 2 circles, 3 triangles, and some rectangles. Explain how you made it to someone!
5. Read *Shape, Shape, Shapes* by Tana Hoban. Walk outside what shapes do you see? Draw all the shapes you see.

### Week 4

1. Look at some of your toys. Try to sort them into groups. How many are in each group?
2. Explore <http://www.playkidsgames.com/> What math did you learn?
3. Count backwards starting at 10...; 15...; 20...; 25...
4. Make numbers or shapes out of play dough
5. Read *The Button Box* by Margarette Reid. Find a collection in your house to sort. How many in each group?

### Week 5

1. How long is your room? Measure with blocks or toys. Measure with your feet. Which was more? Which is less?
2. Find 10 coins in your house. What do they add up to? Is it more or or less than 25 cents?
3. Name five different places you see numbers outside (on street signs, stores, license plates...). Draw a picture of the places.
4. Bobby Bear is missing 5 buttons on his jacket. How many ways can you use blue and red buttons to finish his jacket? Draw a picture of all your ideas.
5. Draw what you are doing at 2 different times today when the minute hand on the clock is on the '12'.

### Week 6

1. Do a yes/no survey asking people in your house, "Do you like the rain?" Circle which side has the most answers.
2. Play Double Compare (see directions). What number facts are easy for you?
3. Roll two number cubes or dice and add the two numbers together. How many times did you have to roll to get a 12? Try again.
4. Play a strategy game like **Tic-Tac-Toe**, **Connect 4** or **Checkers**. Did your strategy work? Will you try a different strategy the next time you play?
5. Estimate how many spoonfuls it will take to finish your cereal. Count each spoonful as you eat. How close were you to your estimate?

### Week 7

1. Go around your house and count the windows and doors. Are there more windows or doors? Draw the one with more.
2. Pick a number from 1 - 12. Find the number around your house! Look at clocks, phones, books, magazines, etc... Pick another number.
3. Read *Ten Black Dots* by Donald Crews. Name different objects that come in groups of 1, 2, 3, ... Make your own book!
4. I am thinking of a number. It has 1 ten and 5 ones. What number am I thinking of? Make up some riddles using tens and ones.
5. Play Close to 10 (see directions). How does this help you practice your facts?

### Week 8

1. Practice "counting" on from numbers other than 1. Example: Start at 4, 5, 6, ...; Start at 17, ...; Start at 32, ...
2. Build something with 20 blocks or Legos. Describe your structure and the shapes you used.
3. Play with bubbles. How many can you blow in one minute?
4. Set the table for dinner! How many plates do you need to put out? How many forks? How many glasses? Make sure everyone has a place!
5. Describe two different ways to make 10 cents.

### Week 9

1. Draw and label a picture of your family from tallest to shortest.
2. Play **Compare** (see directions). How did you decide which number is greater?
3. Count the number of steps it takes to get from your front door to the refrigerator. Represent this number.
4. Explore GregTangMath.com. What math did you practice?
5. Play **Compare**, **Double Compare**, or **Close to 10** again. Which game was your favorite? Why?

YOU DID IT! Please bring your journal to your first grade teacher on the first day of school.

## 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.

#### APPS for K-2

- Adventure Basic School Math
- Amazing Coins
- Count Money
- Everyday Mathematics, Addition Top it
- Fast Facts Subtraction
- Juicy Math
- Math Bingo
- Okta’s Rescue
- Operation Math
- Coin Math
- Super 7
- Native Numbers PK-K

#### APPS for all Grades

- Fast Math
- Fast Math Challenge HD Fraction App by Tap to Learn
- Kakooma
- Math Matrix HD
- Quick Math Game
- PopMath
- iEstimation
- Pick-a-Path
- Sumdog
- Conundra Math
- 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!

#	<u>Date Completed</u>	<u>Description of Math Activity</u>
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		