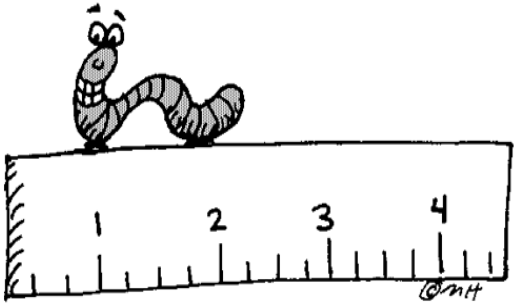
Summer Math Calendar
Fourth Grade



Get ready to discover math all around you this summer! Just as teachers encourage students to continue reading throughout the summer to solidify and retain reading skills, we feel the same attention should be given to mathematics. Regular practice over the summer with problem solving, computation, and math facts will maintain and strengthen math gains made over the school year. The Math Specialists of Brookline have created this summer math calendar to provide your child and your family with a variety of math activities to explore this summer.

Inside you'll find creative activities that include measuring and counting everyday objects, math games, riddles, basic facts practice, math web sites and math literature books (available through Brookline's public libraries). The goal is for your child to have fun thinking and working collaboratively with you while communicating his/her mathematical ideas. While you are working on these activities, ask your child **how** he found that solution or **why** she chose that strategy. These activities help reinforce the concepts/skills your child learned this past year so that s/he can retain them over the summer.

This packet consists of 2 calendar pages, one for July and one for August, an alternate summer math calendar as well as directions for math games to be played at home. (Note: a substitute for numeral cards can be a regular deck of cards without the face cards or Uno cards.) Each month's activities are organized into 28 "math boxes." ***You can choose which activities you'd like to complete on which day***. We encourage your child to complete 20 math boxes each month. After completing a box, color it in. In September return the calendar, with your signature, to your child's new teacher.

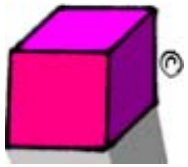
We recommend that you integrate an average of 15-20 minutes of math activities into your child's day, including completing the enclosed activities *and* reviewing basic facts. Number facts can be practiced and reinforced through repeated use in games, real-life problems, songs, rhymes, and cards. Help your child to identify "FACTS I KNOW" and the "FACTS I AM WORKING ON." Think of regular and convenient times to review these facts, such as waiting in line, driving in a car, riding the train, reading time, etc.

We hope that you will enjoy the activities, extend them, create new ones and ***have fun!***

Public Schools of Brookline
K-8 Mathematics Department

We welcome your feedback on the calendar (tara_washburn@brookline.k12.ma.us).

July
Fourth Grade Calendar
Brookline



Directions: Complete **any** 20 math boxes and color in the box after you complete it. Return the Math Calendar to school in the fall.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
3 x 4 3 x 5 7 x 6 7 x 7 What clues help you? Skip count by 3s forward & backward.	Play ***Chairs*** on the web.* ***Mode: Guess*** If you have 8 tables, what's the greatest number of people you can seat in a line?	How many different ways can you make $3.25? How many quarters can you have if you have $3.25?	Record the temperature for 5 days. Temp _____ Temp _____ Temp _____ Temp_____ Temp _____	Use your temperature data to create a bar graph. What do you notice?	Play the game **Close to 100.** (see directions)	4 x 4 5 x 5 6 x 6 7 x 7 8 x 8 9 x 9 Name the pattern.
Begin with 12 and count by 3s to 36. Begin with 12 and count by 4s to 48.	Play ***Product Game*** on the web.* Read the directions carefully. Move the rectangles at the bottom to try to get 4 products in a row.	25 x 2 25 x 3 25 x 4 25 x 5 25 x 6 25 x 7 What's your strategy?	Read ●***Jump Kangaroo, Jump!*** By Stuart Murphy. Divide 24 toothpicks into equal groups. What is ⅓ of 24?	What time is it now? What time will it be in 6 ½ hours? What time was it 15 minutes ago? 18 minutes ago?	Play a game like **Checkers**, **Mancala, Chess, Blokus or Soduko.**	What cars are parked on your street? Create a table of the make of cars parked on your street (ex., Honda, Toyota).
How many Cheerios or macaroni can fit in a ½ cup? Estimate how many Cheerios or macaroni would fit in 1 cup? What about ¼ cup?	If you took a ½ cup of Cheerios or macaroni and lined them up, how long do you estimate your line will be? Measure your line using cm and inches?	325 + ___ = 375 500 = 475 + ___ ___ + 550 = 600 275 + ___ = 350 300 - ___ = 225 220 + ___= 350 440 = 125 + ___ What's your strategy?	If Mia painted 400 finger nails, how many people did she see? If the vet examined 26 dogs, how many paws did she see?	Read ●***Spaghetti and Meatballs for All*** by Marilyn Burns. If 64 guests sit at tables of 4 people, how many tables do you need? Write an equation.	If the movie actually began at 7:05 and finished at 8:45, how much time elapsed? If you left home at 6:35 and returned at 9:05, how long were you out?	Read ▼***Amanda Bean's Amazing Dream*** by C. Neuschwander. A farmer has 10 cows, 15 ducks, 12 pigs. How many legs are on the farm?
Play the game **Race to Zero.** (see directions)	Survey 10 people about their favorite ice cream or popsicle flavor. Create a pictograph to show the results. Remember to use a key.	What number am I? I am less than 25x10 and greater than 22x10. I am a multiple of 5. I am odd. The sum of my digits is 10.	Play ***Concentration*** on the web.* Choose *cards: fractions games: face down* Draw pictures that represent: ¼, ⅔, ½, ¾.	134 + 10 144 + 100 244 + 20 264 + 200 384 – 30 464 – 10 What's your strategy?	As of today's date, record the Wins and Losses of the Red Sox this season. Wins_____ Losses_____	Estimate the Wins and Losses at the end of the season. Wins _____ Losses _____ Explain your thinking to an adult.

* Website Directions: Go to: **illuminations.nctm.org** Click on **ACTIVITIES.** Click on **3-5** and press **SEARCH**.

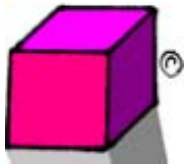
grade 3.July calendar.07

• Book is available through Brookline's public libraries or Minuteman library network (▼)

Parent's Signature: _____ Child's Name: _____

Created by the Math Department, Public Schools of Brookline, 2007

August
Fourth Grade Calendar
Brookline



Directions: Complete **any** 20 math boxes and color in the box after you complete it. Return the Math Calendar to school in the fall.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Play a game like **Checkers**, **Mancala, Chess, Blokus or Soduko.**	What number do you add to 74 to get 100? What are 2 numbers you can add to 245 to get 300? 245 + ___ + ___ = 300	Count the change an adult has this morning. Count the change an adult has this evening. What's the difference?	4 x 4 4 x 5 4 x 6 4 x 7 What clues help you? Skip count by 4s forward & backward.	Find out your height and/or weight. How many telephone books would it take to equal your weight? Your height? Estimate and check.	6 x 4 6 x 5 6 x 6 6 x 7 What clues help you? Skip count by 6s forward & backward.	Explore a website* Play ***Bobbie Bear. Choose: Customize*** How many outfits can you make with 4 shirts and 3 pants?
Roll 2 dice together and multiply to find the product. Record the products. Do this 25 times. Create a bar graph with the results. What did you notice?	Play ***Pan Balance-Shapes (Fixed Values)*** on the web.* Find 3 combinations that balance 2 purple triangles.	I am thinking of an even number. It is *greater* than 7x6 and less than 6x10. It has a factor of 7. What number am I?	Read ▼***One Hundred Hungry Ants*** by Elinor Pinczes. Describe 4 ways to group 108 ants?	How many hours did you sleep last night? Bedtime: _____ Woke up: _____ Hours:___ Min: ___	Play a game **Race to Zero.** (see directions)	60 ÷ 5 = ___ 55 ÷ ___ = 5 50 ÷ 5 = ___ 45 ÷ ___ =5 35 ÷ 5 = ___ What's your strategy?
8 x 4 8 x 5 8 x 6 8 x 7 What clues help you? Skip count by 8s forward & backward.	Play a game **Close to 100.** (see directions)	9 x 4 9 x 5 9 x 6 9 x 7 What clues help you? Skip count by 9s forward & backward.	Finish the table. What's the rule? Input / Output 2 / 50 4 / 100 ___ / 200 6 / ___	Read ●***Fraction Fun*** by David Adler. Which is larger ⅔ or ¾? How do you know? Prove it.	If you called your cousin in London at 8:00 pm Boston time, what time would it be in London? (hint: London is 5 hours ahead)	Find the perimeter of the front of a cereal box in cm. Can you draw a different shape with the same perimeter? Use a cm ruler.
Read ●***Dave's Down-to-Earth Rock Shop*** by Stuart Murphy. Collect 24 rocks (or shells). How many different ways can you organize them?	Find a shoebox and measure the perimeter of the top of the box. If a stamp is 1 inch by 1 inch, how many stamps would you need to make a border around the top?	Looking at a calendar, ask a friend to choose 4 days that form a square. Your friend should tell you only the sum of the 4 dates and you determine the dates.	Play ***Concentration*** on the web.* Choose *cards: fractions, games: face down* Make matching cards on index cards and play with a friend.	How many seconds are in 5 minutes? How many minutes are in 4 hours? How many seconds are in 2 ½ minutes?	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.	Estimate the number of pieces of flatware in your kitchen. Count to check. How many people could you serve at 1 time? Est:____ Exact_____

* Website Directions: Go to: **illuminations.nctm.org** Click on **ACTIVITIES.** Click on **3-5** and press **SEARCH**.

grade 3.August calendar.07

● Book is available through Brookline's public libraries or Minuteman library network (▼)

Parent's Signature: _____ Child's Name: _____

Created by the Math Department, Public Schools of Brookline, 2007

RACE TO ZERO

You will need:

- 2-4 players
- 2 dice
- paper (for scoring) and pencils for **each player**

How to play:

- Each player begins by writing 100 at the top of their paper.
- Determine which player goes first by rolling 2 dice each. Player with the highest **product** (of the 2 rolled numbers) goes first.
- Player 1 rolls the two dice and multiplies the numbers to find their **product**. Player 1 then subtracts that product away from 100 and records the remaining difference on his/her score sheet. *(For example, if you rolled 6 and 4, your product would be 24. Then you'd subtract 100-24 to get the difference of 76.)*
- Player 2 takes a turn.
- In the following turns, players roll the dice, calculate the product, and subtract the products from the new remaining number.
- If a player cannot subtract his/her product, that player loses his/her turn.
- The first player to reach zero exactly wins.

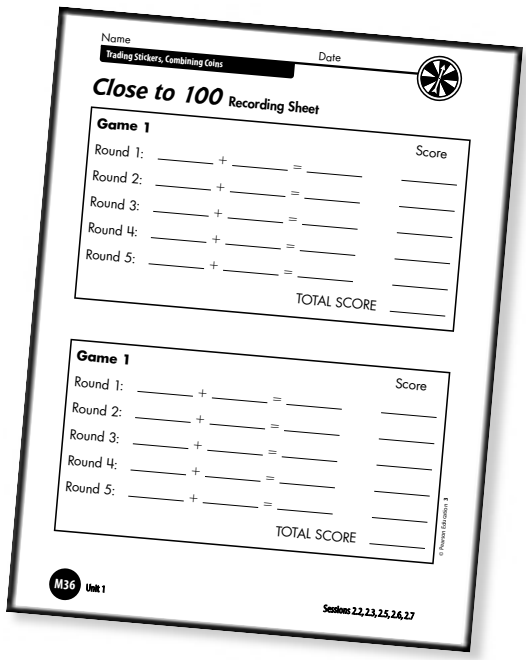
Variations:

You could substitute playing cards (1-6) for the dice. Divide the deck of cards into 2 piles, face down. Instead of rolling dice, the player would flip a card from each pile and multiply the numbers to find their product.

My Score Sheet

100
- 24 (6x4)
76
- 8 (2x4)

Close to 100

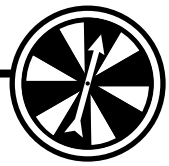

Name
Trading Stickers, Combining Coins
Date
Close to 100 Recording Sheet
Game 1
Round 1: ____ + ____ = ____ Score
Round 2: ____ + ____ = ____
Round 3: ____ + ____ = ____
Round 4: ____ + ____ = ____
Round 5: ____ + ____ = ____
TOTAL SCORE
Game 1
Round 1: ____ + ____ = ____ Score
Round 2: ____ + ____ = ____
Round 3: ____ + ____ = ____
Round 4: ____ + ____ = ____
Round 5: ____ + ____ = ____
TOTAL SCORE
M36 Unit 1
Sessions 2.2, 2.3, 2.5, 2.6, 2.7

You need

- Digit Cards (deck of 44)
- *Close to 100* Recording Sheet for each player

Play alone, with a partner, or in a small group.

1. Deal out six Digit Cards to each player.
2. Use any four cards to make two numbers; for example, 6 and 5 could make either 56 or 65. Wild cards can be used as any numeral. Try to make numbers that, when added, give you a total that is close to 100.
3. Write these two numbers and their total on the *Close to 100* Recording Sheet; for example, 42 + 56 = 98.
4. Find your score. Your score is the difference between your total and 100. For example, if your total is 98, your score is 2. If your total is 105, your score is 5.
5. Put the cards you used in a discard pile. Keep the two cards you did not use for the next round.
6. For the next round, deal four new cards to each player. Make more numbers that come close to 100. When you run out of cards, shuffle the discard pile and use those cards again.
7. Five rounds make one game. Total your scores for the five rounds. The player with the LOWEST score wins.



Close to 100 Recording Sheet

Game 1	**Score**
Round 1: ____ ____ + ____ ____ =	____ ____
Round 2: ____ ____ + ____ ____ =	____ ____
Round 3: ____ ____ + ____ ____ =	____ ____
Round 4: ____ ____ + ____ ____ =	____ ____
Round 5: ____ ____ + ____ ____ =	____ ____
TOTAL SCORE	____ ____

Game 2	**Score**
Round 1: ____ ____ + ____ ____ =	____ ____
Round 2: ____ ____ + ____ ____ =	____ ____
Round 3: ____ ____ + ____ ____ =	____ ____
Round 4: ____ ____ + ____ ____ =	____ ____
Round 5: ____ ____ + ____ ____ =	____ ____
TOTAL SCORE	____ ____

Alternate Summer Math Calendar for Grade _____

If the activities suggested don't seem to "fit" your child, or if you have your own websites/literature/math practice you'd like to do, you can create-your-own math calendar. Feel free to substitute your own activities in this Alternate Summer Math Calendar or mix-and-match some of the grade-level activities with some other 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 20 activities each month (so you may need an extra recording sheet).

No.	Date Completed	Description of Math Activity
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		

Child's name: _____ Parent signature: _____

Remember, we welcome your feedback! Send your thoughts/suggestions to: tara_washburn@brookline.k12.ma.us