



# Getting ready for Second Grade!

In Grade 1, instructional time in math focused on four critical areas:

## Critical Area One

- Developing strategies for adding and subtracting whole numbers.

## Critical Area Two

- Developing understanding of whole number relationships and place value for 10's and 1's.

## Critical Area Three

- Developing understanding of linear measurements and measuring lengths as iterating units of length.

## Critical Area Four

- Developing understanding of reasoning about attributes of and composing and decomposing geometric shapes.

The following summer math activities will enable your child to review math concepts and reinforce skills learned this 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 your child to have fun thinking and working collaboratively to communicate mathematical ideas. While your child is working, discuss the math concept being reinforced.

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

## DOs and DON'Ts for Helping at Home

### DO:

- Expect your child to work hard and be good at math.
- Ask “How did you get that?” “Can you show me another way to do that?” “Remember how you did \_\_\_\_\_, see if you can use that same strategy.”
- Encourage your child to stick with a task even if it seems challenging.
- If you see signs of frustration, suggest leaving the problem for a day or two and returning to it with fresh perspective at another point.
- Listen carefully to how your child is thinking about math.

### DON'T:

- Try not to tell your child how to figure something out; he or she will learn much more by figuring it out for him or herself. You can always say, “Show me how you figured that out.” Then wait and listen and say, “Oh, that’s nifty. Here’s how I might figure it out. How are our strategies the same?”

## DO ASK -- DON'T TELL

**You can ask great questions without telling your child what to do!**

### In the beginning....

- What do you know?
- What do you need to find out? How might you begin?
- What should you do first?

### While working....

- How can you organize your information?
- Can you make a drawing to explain your thinking?
- What would happen if...?
- What do you need to do next?
- Do you see any patterns? Any relationships?
- Can you predict...?
- Does this remind you of any other problems you’ve done?

### Reflecting on Solutions...

- Is your solution reasonable?
- How did you arrive at your answer?
- Can you convince me that your solution makes sense? What did you try that didn’t work?

### Responding...

Your response is as important as your initial question. Continue to discuss problems even after children have their answer. This will give your child a chance to clarify thinking and make more connections.

### You can ask:

- How do you know that your answer makes sense?
- Do you know another way to solve this?
- Do you think there is more than one answer? How could we find out?

## 20 Days of Summer Math Fun in JULY

<p><b>1.</b> If Mary has 18 cents and Jacob has 2 cents, how much money do they have together? What is another way to make 20 cents? (15 and 5, etc.) Record your thinking.</p>	<p><b>2.</b> If you save two cents (or two of your local currency) every day in the month of June, how much money will you have saved at the end of the month? Draw a picture or equation to show your thinking.</p>	<p><b>3.</b> Sort the laundry into categories (owner, color, item type (pants/shirt). Make a bar graph and compare the categories. If by owner: Who has more clothes? Who has less? If by color: Who has more ___ colored clothes? etc. Record your graph.</p>	<p><b>4.</b> Go on a Shape Hunt around your home. Look for items shaped like a square, rectangle, and a triangle. Draw and label the items. These are all 2D shapes. Do you remember any 3D shapes? Hint: a cylinder is one but there are more!</p>	<p><b>5.</b> Blow a marble, a bottle cap and a pencil across a table or 3 similar objects. Measure using inches, cm, or pennies how far they go. Which goes the farthest? By how much? Why do you think they went different distances?</p>
<p><b>6.</b> Add 10 to the following numbers. (18, 37, 40, 79) What do you notice? What changes? The ones or tens? Show your work.</p>	<p><b>7.</b> Write down all the doubles you know. (<math>2+2=4</math>, <math>8+8=16</math>, etc.) Try and learn two more if you don't know all of them 0 to 10.</p>	<p><b>8.</b> Terique has 57 video games and his friend has 20 less than Terique. How many video games does his friend have? Show your work and write an equation. What if his friend had 10 more?</p>	<p><b>9.</b> Start with the following numbers: 24, 66, 11, 30, and count by 10's to 100. Record your answers for each number. For example, if I started with 72: 72, 82, 92, 102</p>	<p><b>10.</b> Are the equations "true" or "false"? Explain. Work them out to be sure!  <math>3+4+2=4+5</math>  <math>5+3=8+1</math>            Can you think of your own?</p>
<p><b>11.</b> Read a book about math. (There is great list attached to this calendar.)</p>	<p><b>12.</b> Write the number made by the tens and ones listed:            2 tens and 3 ones = 23            5 ones and 8 tens;            1 ten and 0 ones;            3 tens and 3 ones.            Can you make your own?</p>	<p><b>13.</b> Roll two dice. Practice addition and subtraction by adding or subtracting the two numbers. If you don't have dice, have an adult give you two numbers at a time to add or subtract! Show your work.</p>	<p><b>14.</b> Do the following equations. Can you do them on a number line?  <math>40 + 80 =</math>  <math>30 + 50 =</math>  <math>23 + 60 =</math>            Record your work.</p>	<p><b>15.</b> I went to the park and I saw 18 rabbits playing in the grass. When I came back from lunch, I only saw 10 rabbits. How many left while I ate lunch? Show your thinking with pictures and an equation.</p>
<p><b>16.</b> Tell the time that you go to bed to the closest hour or half hour. Draw a picture of the clock's hands for that hour. Can you draw it on a digital and analog clock?</p>	<p><b>17.</b> Jump rope and count by tens to 100. Try counting backwards. If you don't have a jump rope, just hop or jump and count by 10's. Can you count backwards by 10s from 100?</p>	<p><b>18.</b> Today's number is 18 Make 18 by: -adding two numbers -subtracting two numbers -adding three numbers            Record your thinking. Now try it with the number 40.</p>	<p><b>19.</b> Jahniya has 7 dolls, 20 necklaces, and 12 games. How many things does she have in all? Show your work.</p>	<p><b>20.</b> 50 is the answer. What could the question be? Come up with 4 more equations. For example: <math>60-10=50</math></p>

## 20 Days of Summer Math Fun in AUGUST

<p><b>1.</b> Hold an ice cube in your hand. If it's too cold lay it on the sidewalk or a plate. Count by 2's until it melts. Did you count to more or less than 100? Why did it melt?</p>	<p><b>2.</b> Using a ruler, find 3 things longer than 20 centimeters and 3 things shorter than 20 centimeters. If you don't have a ruler. Find a shoe and use that...find 3 things longer than the shoe and 3 things shorter than the shoe.</p>	<p><b>3.</b> Ask 5 people their phone numbers. Add the digits of each phone number together. Whose phone number has the highest value? Show your work.</p>	<p><b>4.</b> The number of the day is 78 -add ten -subtract ten -how many ones? tens? - Make 78 by adding 2 numbers -Make 78 by subtracting 2 numbers</p>	<p><b>5.</b> How many different ways can you cut a sandwich into fourths? Try it with real or paper sandwiches. Record your work with drawings!</p>
<p><b>6.</b> Some 3D shapes are cylinders, cubes, spheres, cones, and pyramids. Use playdough, dirt, sticks, paper, etc. to make one or more of the shapes. Write about what you did.</p>	<p><b>7.</b> Write down the time you eat dinner to the nearest half hour for each day this week. 6:30 or 5:00. Draw the time on an analog AND digital clock. What day did you eat the earliest? latest? Record your work!</p>	<p><b>8.</b> Go to the park or outside and draw the shapes you see. Do you see more rectangles than triangles? What are the attributes of triangles and rectangles? (how many sides, corners, etc.) Record your work</p>	<p><b>9.</b> If you bake 30 cookies and you want to give 10 cookies to each one of your friends, how many friends could you give 10 cookies to? Draw a picture to help you figure it out or make some cookies and try it!</p>	<p><b>10.</b> Start at your front door and walk to the stove. Record how many steps it took. Start at your front door and walk to the bathroom and record how many steps it took. Which took more? How much more? (Try giant steps) Record your thinking</p>
<p><b>11.</b> Jason mows lawns for money. He gets \$5 for each yard he mows. If he mows 6 yards how much money would he have? What if he got \$10 for each yard? Draw a picture to help you!</p>	<p><b>12.</b> Use a number line to record how you would count by 10's from 55 to 95. Remember your 1st number should be 55 not 0 or 1. Show your work</p>	<p><b>13.</b> Write a story problem to go with <math>6 + 8</math>. Now write a subtraction problem for <math>14 - 6</math>. Draw pictures to go with both!</p>	<p><b>14.</b> Circle the number that is greater out of each pair. How do you know? 78 or 87 32 or 12 50 or 5 87 or 54</p>	<p><b>15.</b> Ask 10 people their favorite food. Record your data in a chart or graph. Compare the results by looking at your data. Did anyone like the same foods? more or less of a food than another?</p>
<p><b>16.</b> Estimate how many pieces of cereal are in <math>\frac{1}{4}</math> cup. Count the pieces. Now estimate how many <math>\frac{1}{4}</math> cups fill in your cereal bowl. Check.</p>	<p><b>17.</b> Use these numbers in a story problem: 18, 9, 9 Ask an adult to solve your story problem. Remember you can add, subtract, or both! Record your work!</p>	<p><b>18.</b> Jason has 75 red and blue fish. If 20 are red how many are blue? Show your work with an equation and pictures.</p>	<p><b>19.</b> Make up a challenge word problem for your mom, dad, sister, brother, neighbor, or friend!</p>	<p><b>20.</b> Annie collects marbles. She has 5 pink marbles, 4 red marbles and 6 green marbles. How many marbles does she have in all?</p>

## Recommended Math Reading List

Author	Title
Aber, Linda Williams	Grandma's Button Box (Math Matters Series.)
Angelou, Maya	My Painted House, My Friendly Chicken, and Me
Anno, Mitsumasa	Anno's Counting Book
Baer, Edith	This is the Way We Eat Our Lunch
Bang, Molly	Ten, Nine, Eight
Burns, Marilyn	The Greedy Triangle
Chocolate, Debbi	Kente Colors
Crews, Donald	Ten Black Dots (Available in Spanish)
Dale, Penny	Ten in Bed
Cynthia Weill and Pahm Viet-Dinh	Ten Mice for Tet!
Dodds, Dayle Ann	The Shape of Things
Dunbar, Joyce	Ten Little Mice
Ehlert, Lois	Color Zoo
Ehlert, Louise	Fish Eyes
Emberley, Rebecca	My Numbers Mis Numeros
Falwell, Cathryn	Feast for 10 / Shape Space
Grossman, Virginia	Ten Little Rabbits

Hoban, Tana	Count and See / Shapes, Shapes, Shapes
Keenan, Sheila	More or Less a Mess
Krebs, Laurie	We All Went On Safari: A Counting Journey Through Tanzania
Harris, Trudy	Pattern Bugs / Pattern Fish
Lionni, Leo	A Busy Year / Inch by Inch
Martin, Bill	Chicka Chicka 1, 2, 3
Martin, Jr. Bill, and John Archambault	Chicka Chicka Boom Boom
Mora, Pat	Uno, Dos, Tres, One, Two, Three
Moss, Lloyd	Zin! Zin! Zin! A Violin
Murphy, Stuart J	Animals on Board / The Best Vacation Ever / Monster Musical Chairs
Peek, Merle	Roll Over! A Counting Song
Pluckrose, Henry Arthur	Math Counts: Sorting
Reid, Margarette S	The Button Box
Rogers, Paul	The Shapes Game
Roth, Susan L	My Love for You All Year Round
Russo, Marasabina	The Line Up Book
Sloat, Teri	From One to One Hundred
Swinburne, Stephen R	Lots and Lots of Zebra Stripes: Patterns in Nature
Turpin, Lorna	The Sultan's Snakes
Walsh, Ellen Stoll	Mouse Count

Walton, Rick	How Many, How Many, How Many
Wormell, Christopher	Teeth, Tails & Tentacles: An Animal Counting Book