

Math with Your Fourth Grader

page 1 of 2



As your child nears the end of elementary school, you may find it a little more challenging to help with homework. The math might seem less familiar and it might be harder to work together productively than it was when your child was younger. Above all else, you can help your child be successful by communicating that you think math is useful, important, accessible, and interesting.

Math in Family Life

By the end of fourth grade, children should have mastered all basic facts and be able to compute with larger numbers, make good estimates, compare fractions and decimals, and interpret tables and graphs. The examples below might give you some ideas about how to practice these and other important skills with your child as you go about your daily life.

At Home

- Cook with your child. Ask him or her to measure ingredients and help you halve or double a recipe. Ask him or her to think about conversions. (*This can of tomato juice is 24 fluid ounces. We need to use 2 and a half cups of tomato juice. How many fluid ounces of tomato juice will be left in the can?*)
- Ask for your child's help in figuring elapsed time. (*It takes about 25 minutes to get to Aunt Sue's house. We're supposed to be there at 2:15. What time should we leave?*)
- Open a savings account with your child and help him or her think of ways to earn and save money.
- Sewing, building, and other household projects can involve lots of math. For example, ask your child to help calculate how many gallons of paint or yards of fabric are needed for your project.
- Talk about how you and other adults you know use math in your jobs, or talk about how math is involved in jobs and activities that interest your child.

At the Store

- Ask your child to figure out or estimate the new price for sale items.
- Ask your child to compare different brands. Which one is a better buy?
- Ask your child to figure prices based on cost per pound or number. (*These apples are \$1.49 per pound. If we get 3 pounds, how much will it cost? or Sneakers are \$27.99 per pair. How much would 3 pairs cost?*)

On the Go

- Ask your child to read the schedule and figure elapsed time related to the schedule. (*How frequently does this bus come? or Our bus is scheduled to come at 3:47 and to get downtown at 4:08. How long is the ride?*)
- Ask your child to think about fractions and distances. (*It's 23 miles to Imani's house. We've gone 7 miles. Is that more or less than a third of the way?*)

Math Materials to Have at Home

- Keep these items in your home and help your child use them.
- calculator
 - ruler
 - measuring tape
 - calendar
 - clock with hands
 - measuring cups
 - measuring spoons
 - many real coins and bills of different amounts
 - outdoor thermometer

Games That Use Math

- Playing games together is a relaxed and effective way to improve students' basic skills. The following games are appropriate for fourth graders.
- Mancala
 - Monopoly
 - chess
 - Risk
 - Senet
 - Stratego
 - Yahtzee
 - Go

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page 2 of 2

Helping with Homework

You show your child that math and school are important when you help with homework. You can also see what your child is learning and make sure that your child is mastering the skills you think are important. The following ideas can help make homework time enjoyable and productive for you and your child.

Attitude

- Approach homework with an open, can-do attitude. Show that math is interesting and do-able.
- Express confidence in your child's and your own ability to do math. Even if you found math frustrating when you were in school, try to avoid saying things like, "Math is so hard." Instead, you could say, "Sometimes I get stuck when I'm doing math, but if I take a break and try again, I might get a new idea."
- Keep interactions about math relaxed and enjoyable. Don't drill your child on facts over dinner.
- Praise persistence and creativity in problem solving, as well as finding the right answer.

Solving Difficult Problems

- Take time to listen before offering help. You'll need to know what is confusing to your child before you can be helpful, and it is important for your child to learn how to describe what is confusing and why.
- If you both get stumped on a problem, take a break and come back to it in a few minutes.
- If you and your child both get stuck, focus on writing a clear question or explanation of what is confusing. Have your child show it to the teacher to get more help. This helps your child take responsibility for his or her own learning and develop a good relationship with the teacher.
- Consider asking an older brother, sister, cousin, or friend to help with math homework. Even if you are comfortable with the math, your child may be more open to help from someone else.

Helpful Problem Solving Strategies

- Have your child solve a similar problem with smaller, easier numbers first.
- Have your child use objects like beans, pieces of pasta, or coins to solve a problem.
- Act out the problem or draw a picture of the problem with your child.
- After your child has finished the problem, have him or her check the answer by working the problem backwards. (For example, if she subtracted to find the answer, she would add to check it.) It is important for students to check their own work to be sure their answers make sense and are correct.
- Talk about how you solve problems: your thinking processes and methods may be useful to your child.

If Your Child Struggles

Talk to your child's teacher if he or she struggles with homework. The teacher can suggest or provide games or worksheets for use at home. Set specific goals with the teacher (e.g., master all the times-7 facts) and keep track of progress toward them so that practice at home is focused and productive.

If Your Child Excels

Your child's teacher can recommend challenging and engaging games and activities. You might also want to subscribe to a kids' math magazine like *Math* or *Dynamath*. The Web sites below are also good sources of problems, challenges, and real-world math connections.

plus.maths.org nrich.maths.org/public/
www.figurethis.org/challenges/challenge_index.htm

For more information about helping your fourth grader with math, including mathematical background and online practice games, go to www.mathlearningcenter.org/resources/materials/parents4.asp.