



Homework

How to Help Your Child with Homework

Supporting Children as Learners: Making Sense of Mathematics Together

In *How to Help Your Child with Homework*, the Family Math authors share how family members and caregivers can ask productive questions that help children make sense of mathematics while doing their homework.

What if your child comes home with a math problem and says, "I don't get it!"

Your job is to think of questions that will engage him or her in the problem:

- What is the problem about? Tell me in your own words.
- What did you do in class to get started?
- Can you make a diagram or draw a sketch?
- What assumptions are you making?
- How do you know you are solving the right problem?
- Could there be any missing or extra information?
- Can you solve a simpler version of the problem?

What if your child comes home with a problem partially done and is stuck, and doesn't know what to do next?

Your job is to ask questions that will help him or her get unstuck:

- What have you already tried? What steps did you take?
- Can you tell me what you know so far?
- What is the important information you need to solve the problem?
- Did you check your arithmetic?
- Can we break the problem down?
- Do you notice a pattern?

What if your child comes home and says, "I don't have any homework" or "I've already done all of my homework"?

Your job is to take a few minutes and go over the homework with your child:

- Does your answer make sense?
- Could there be more than one answer? How do you know?
- How do you know your answers are correct?
- Is there anything you might have overlooked?
- Did you do all parts of the problem?
- Did you check your arithmetic?
- Did you label your answers?
- Did you show all of your work?
- What do you think you were supposed to learn from this homework?
- What new questions or problems might you now pose and explore?

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Questions

Parents As Questioners

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Mathematical investigations present new and sometimes unexpected mathematical situations, so the teacher cannot have taught the way to solve the problem in advance. The student needs to apply prior knowledge in ways that make sense to the situation. There may be many paths to follow and many outcomes, depending on the problem; the student must make his or her own plan for finding a solution. Parents can assist their children to be independent problem solvers by becoming guides or questioners. They do not need to know how to solve the problem themselves, but can help the students think through the problem and make a realistic plan for solving it.

USE FREELY any questions that will help students think about the way they are tackling the problem:

- What have you tried so far?
- Is there another way to look at the problem?
- Can you explain this to me?
- What makes sense so far?
- Is this like any other problem that you have worked on in any way?
- What is it you are trying to do/solve/find out?

USE SPARINGLY those questions that tend to direct students' thinking:

- How might you organize this?
- Can you make a table of your results?
- Can you see any patterns?
- Have you tried smaller (or simpler) cases?
- How can you get started?
- Have you checked to see that the solution works?
- What would happen if . . . ?

AVOID any hint or question referring to the particular problem:

- Do you recognize square numbers?
- Explore it like this, or try this . . .
- Why not try three counters?
- That's not quite what I had in mind . . .
- No, you should . . .

From *Helping With Math at Home* (Heinemann, 2006). Adapted from Shell Centre for Mathematical Education's *Problems with Pattern and Numbers* (1984, 2001). www.mathshell.com

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