

Figure This!

Math Challenges for Families

Dear Parent or Guardian:

What does math mean to your child's future? Everything! And family involvement in mathematics education is an important part of student success.

You can make a difference! Studies show that when there is a high level of parent involvement in education, children are more successful in school—and in everyday life.

Figure This! challenges are an easy and enjoyable way to get involved with your child's mathematics education. Each challenge was written by mathematics teachers, then tried out with middle school families—like yours—to ensure that the mathematics is sound and the interest is high.

The 80 mathematical challenges in Figure This! illustrate mathematics in real-world contexts. Each challenge includes a problem, a tip for getting started, a complete solution, and an extension of the initial problem called "Try This." Additional problems, things to think about, and a description of where the math is used in the real world help support your explorations. You also will find some fun facts related to the problem and some resources for further investigation.

You can get Figure This! materials on the Web at www.figurethis.org.

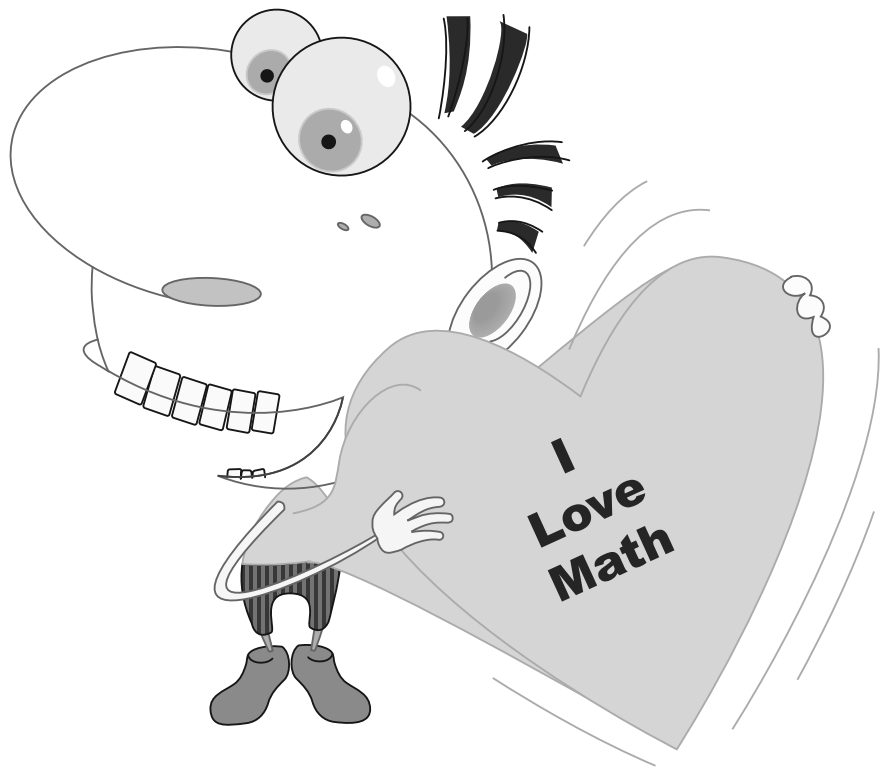


Figure This!

Math Challenges for Families

Answers to Frequently Asked Questions about Figure This!

What is Figure This?

The Figure This! Mathematics Challenges for Families is a public engagement campaign centered on 80 math challenges. The challenges are designed for middle school students and their families to work on together at home. The goal is to show families the math that middle school students should be learning. The campaign also includes family resource materials.

What is a Figure This! challenge?

Figure This! challenges illustrate the excitement, energy, and problem-solving nature of math—in real-world contexts. Each challenge includes a problem, a tip to get you started, the complete solution, and an extension of the initial problem called "Try This." Furthermore, each challenge includes additional problems, things to think about, and a description of where the math is used in the real world. Families also will find some fascinating facts related to the problem and resources for further exploration. The content of the challenges supports the middle grade math detailed in the National Council of Teachers of Mathematics publication *Principles and Standards for School Mathematics*.

Are Figure This! materials available in other languages?

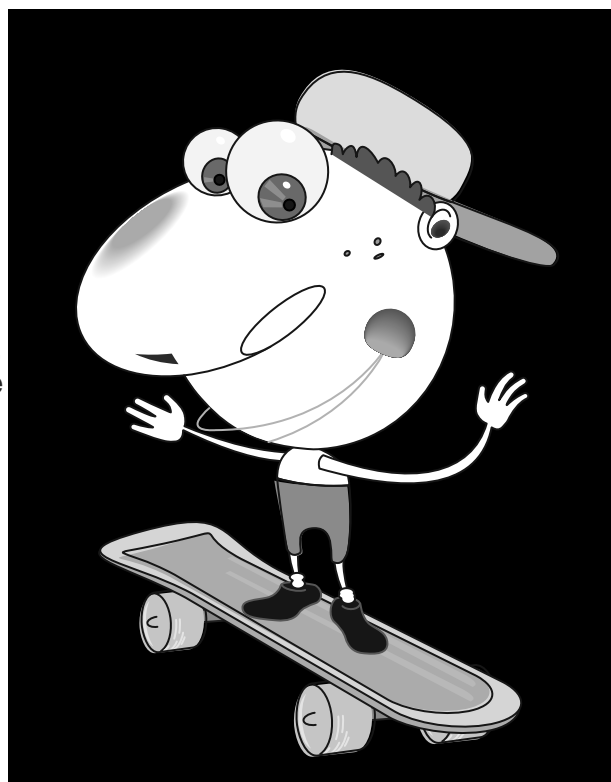
The first 16 challenges are available in English and Spanish. All family support materials are available in both English and Spanish.

What are the family support materials?

A set of five brochures has been developed in both English and Spanish. The brochures include sample questions to ask of teachers and administrators about each child's math education, helpful information about the importance of math, and suggestions to help families work with their children on math homework.

Where can I get Figure This! materials?

Figure This! challenges and family support materials are available on the Web. Families can access Figure This! by visiting www.figurethis.org. All Figure This! materials can be downloaded from the Web site as PDF files.



For family fun with middle school math visit **Figure This!** at www.figurethis.org.

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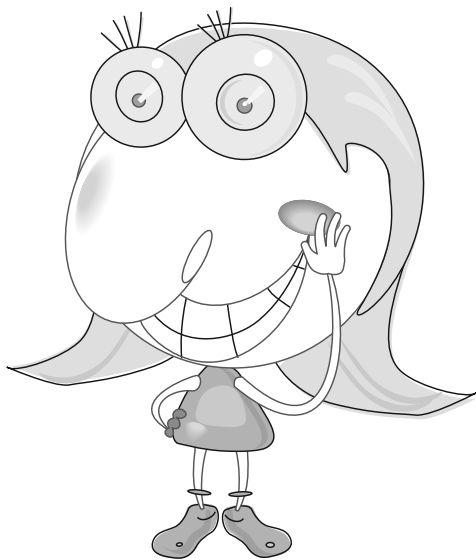
Tips for *Families*

Family involvement in mathematics education is an important part of student success. You can make a difference!

The Figure This! math initiative focuses on family involvement. Figure This! challenges are an easy and enjoyable way to get involved with your child's math education.

Each Figure This! challenge:

- Begins with an interesting problem.
- Provides hints, suggestions for getting started, answers, and a description of one or more ways to solve the problem.
- Suggests follow-up activities that include Try This, Additional Challenges, Things to Think About, and Did You Know That?
- Offers resources for related materials.



Here are some hints for working on the challenges with your child:

- Choose a challenge that you and your child both find interesting. Feel free to skip around among the challenges. Although the challenges are numbered, you can do them in any order.
- Read a challenge together and talk about what the challenge asks you to do.
- As a team figure out what you need besides paper and pencil to solve the challenge. For example, would a calculator or ruler help? Gather the materials before you start.
 - Listen to your child's ideas and share your own. Working on the challenges should be a team effort with you and your child working as equal partners.
 - Be positive about working through the challenge. Use the hints and other supporting information to help move you forward.



Some things you might consider:

- Select a challenge that reinforces the math topic your child is currently studying.
- Involve other members of your family.
- Choose a fixed time during the day or week for working on the challenges.
- Make working on a challenge a special time for the two of you.

There's no one right way to work with your child. For example, you and your child might work together on one or two challenges a week. You might choose to do a challenge one day and work on the accompanying activities on another day. Or you might choose to complete a challenge and some of the supporting activities all at one time.

Figure This! Doing math with your child can be fun. And you can make it happen!