

## 826 Boston Tutor Tips

# Math Tutoring

There is no such thing as a “math person.” Math is creative, experimentative, and can be done by anyone—writers included! Though many tutors are now unfamiliar with the math processes and methods they learned in school, math tutoring sessions are an opportunity for tutors to follow a student's lead explore a new way of looking at numbers.

**The following tips are designed to help you tutor students in math concepts more confidently and effectively.** Reference these tips and check out the list of additional resources when working on math.

### Tip #1:

#### Help students understand the "why."

A math strategy that can be effective is to teach students why a theorem works, or why the equation is done a certain way. It might be helpful to break things down and provide a step-by-step guide that students can refer to as they complete their homework. This also works the other way; if you can, have a student explain to you why they chose to use a certain strategy.

### Tip #2:

#### Don't be afraid to ask students questions.

If you don't know how to answer a math equation, ask the student you are working with. They are in the class and will have notes. Ask them, or the students around them, about what they are doing in class or if they have problems they've done in the past. This gives power to the student and their peers; having a tutor ask questions is a significant lesson for a student. It shows that asking questions is a useful tool and something that students shouldn't be afraid to do.

#### What to Say:

"I don't remember how to do this; can you show me?"

"Why did you decide to [insert action taken by student]?"

"Can you break down the steps you used?"

#### What to Do:

Take notes as a student explains, and use these notes as a resource.

Go through the problem step-by-step.

Look for opportunities for students to collaborate and help each other.

### Tip #3:

#### Be patient; faster isn't better.

One of the most important things to give a student is time. Students need to take time in order to really think about the numbers and what the question is asking. Allow students to fully write out an equation, draw pictures, make estimations, use manipulatives, or even just talk the problem through out loud.

## Tip #4:

### Prioritize understanding over homework completion.

Students will often try to rush through their work so they have less to do at home, but this doesn't help them. As a tutor, it is your job to make sure the student understands and is able to perform the concept on their own. You can also write a note to the student's teacher if they are worried about bringing in incomplete homework.

Boost students' understanding by relating their work to real life, which helps many students have an easier time comprehending math.

## Tip #5:

### Rely on known concepts.

If you are having trouble remembering a concept, solve a problem that you inherently know. For example, if you are having trouble adding fractions, add two that you know like  $\frac{1}{2} + \frac{1}{4} = \frac{3}{4}$  and look at the steps that you did to get that answer. Doing this helps you see the process at which you solve a question. The following tactics can also help you apply known concepts to more complex math.

#### Use "friendly numbers"

Round to a number that is easier to add, subtract, multiply, or divide. For example, instead of adding  $34+26$ , use the numbers  $30+26+4$  or  $34+25+1$  or any combination you feel comfortable with.

#### Use manipulatives to count

Help students visualize numbers by using counting objects, or even fingers, to do math. Let students know it is okay to use manipulatives and encourage them to show their thinking using objects.

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## Additional Resources:

For further tips on math tutoring, check out:

- ["Effective Math Tutoring Tips,"](#) Lower Columbia College
- ["How to Tutor Math,"](#) UNC Wilmington Learning Center
- ["Ideas on Tutoring Elementary Math Students,"](#) Classroom.com