

## Chapter 19

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# Introduction

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Does math really need to be so hard? Nope.

I say this speaking as a guy who has struggled with math as much as, if not more than, you have. Believe me. And a big part of the struggle often has more to do with the lack of clarity in how math is explained than with the actual math.

This is too bad, because the whole idea behind math is supposed to be *clarity*. In a world where so many things are unclear,  $2 + 2$  will always equal 4.

My second-greatest joy in teaching math is when a light breaks across a student's face as they suddenly understand something new. My greatest joy, though, is what often follows: a skepticism that it couldn't possibly be this easy.

When you approach math right, it's almost always easier than you think. And a lot of the stuff that hung you up when you first saw it probably isn't all that scary after all. Many students feel they got lost somewhere along the way on the road between learning to count to ten and their first day in an algebra class — and this may be true whether they're 14 or 104. If this is you, don't worry. You're not alone, and help is right here!

## About This Book

This book brings together the four components you need to make sense of math:

- » Clear explanations of each topic
- » Example questions with step-by-step answers
- » Plenty of practice problems (with more available online!)
- » Chapter quizzes to test your knowledge at the end of most chapters

Although you can certainly work through this book from beginning to end, you don't have to. Feel free to jump directly to whatever chapter has the type of problems you want to practice. When you've worked through enough problems in a section to your satisfaction, feel free to jump to a different section. If you find the problems in a section too difficult, flip back to an earlier section or chapter to practice the skills you need — just follow the cross-references.

## Foolish Assumptions

If you're planning to read this book, you likely fall into one of these categories:

- » A student who wants a solid understanding of the basics of math for a class or test you're taking
- » An adult who wants to improve skills in arithmetic, fractions, decimals, percentages, weights and measures, geometry, algebra, and so on for when you have to use math in the real world
- » Someone who wants a refresher so you can help another person understand math

My only assumption about your skill level is that you can add, subtract, multiply, and divide. So, to find out whether you're ready for this book, take this simple test:

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$$4 + 7 = \underline{\quad} \quad 13 - 5 = \underline{\quad} \quad 9 \times 3 = \underline{\quad} \quad 35 \div 7 = \underline{\quad}$$

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If you can answer these four questions correctly (the answers are 11, 8, 27, and 5), you're ready to begin.

## *Icons Used in This Book*

You'll see the following five icons throughout the book:



**EXAMPLE** Each example is a math question based on the discussion and explanation, followed by a solution. Work through these examples, and then refer to them to help you solve the practice problems that follow them, as well as the quiz questions at the end of the chapter.



**REMEMBER** This icon points out important information that you need to focus on. Make sure you understand this information fully before moving on. You can skim through these icons when reading a chapter to make sure you remember the highlights.



**TIP** This icon points out hints that can help speed you along when answering a question. You should find them useful when working on practice problems.



**WARNING** This icon flags common mistakes that students make if they're not careful. Take note and proceed with caution!



**YOUR  
TURN**

When you see this icon, it's time to put on your thinking cap and work out a few practice problems on your own. The answers and detailed solutions are available so you can feel confident about your progress.

## *Beyond the Book*

In addition to the book you're reading right now, be sure to check out the free Cheat Sheet on [Dummies.com](http://Dummies.com). This handy Cheat Sheet covers some common “math demons” that students often stumble over. To access it, simply go to [Dummies.com](http://Dummies.com) and type **Basic Math & Pre-Algebra All in One Cheat Sheet** in the Search box.

You'll also have access to online quizzes related to each chapter, starting with [Chapter 3](#). These quizzes provide a whole new set of problems for practice and confidence-building. To access the quizzes, follow these simple steps:

1. **Register your book or ebook at [Dummies.com](http://Dummies.com) to get your PIN.** Go to [www.dummies.com/go/getaccess](http://www.dummies.com/go/getaccess).
2. **Select your product from the drop-down list on that page.**
3. **Follow the prompts to validate your product, and then check your email for a confirmation message that includes your PIN and instructions for logging in.**

If you do not receive this email within two hours, please check your spam folder before contacting us through our Technical Support website at <http://support.wiley.com> or by phone at 877-762-2974.

Now you're ready to go! You can come back to the practice material as often as you want — simply log on with the username and password you created during your initial login. No need to enter the access code a second time.

Your registration is good for one year from the day you activate your PIN.

## *Where to Go from Here*