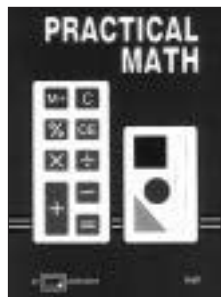


Don't Know Much About Algebra

by Bill Brockway



Practical Math, Staff-written by American Technical Publishers, 1994; 708/957-1100. Softcover, 6x9, 340 pages. \$21.96.

If you've ever had a helper call out a measurement as, "54 inches and ... 5 little marks," you'll appreciate the training this book offers. It's a typical textbook in most respects, but all the sample problems and tests are geared to the building trades. The idea is that if you're going to teach your carpenters how to multiply and divide fractions, you might as well teach them using portions of a 4x8 sheet of plywood as an example.

Practical Math begins with the basics — defining whole numbers and fractions, and explaining how to add, subtract, multiply, and divide them. In keeping with the trades theme, the book uses an illustration of a measuring tape to explain fractions. Anyone who passed 8th grade math should be able to skim this first section, or treat it as a quick review.

The book then gets into decimals, percentages, and, perhaps the most useful chapter, measurements. It clearly explains linear measurement, areas, and volumes, both in the English and metric systems of measurement. The emphasis is on converting between different units of measurement. Sample problems include changing a square-foot measurement to square inches, and calculating the area of a complex building lot from perimeter measurements.

The next chapter, "Powers and Roots," teaches useful skills, especially if you're going to be doing any complex roof framing. The authors get back to the nitty-gritty with a chapter called "Ratios and Proportions." Direct

and inverse proportions are defined and most of the problems in the chapter relate to worker-hour calculations. (If 2 carpenters build 12 trusses in 8 hours, how many trusses can 6 carpenters build in 16 hours?)

The next couple of chapters deal with plane figures and solid figures, giving the reader a quick introduction to geometry and trigonometry — but without using these sometimes intimidating words. All of the formulas are useful, especially the ones dealing with finding the volumes of complex spaces.

The final chapter is all about graphs and the relationships they represent. The book explains how to read information displayed on line graphs, bar graphs, circle graphs, and pictographs.

If I have one complaint about the book, it's that it tends to oversimplify some of the sample problems. One question asks the student to find how many 1-foot 4-inch cripples can be cut from an 8-foot 2x4, but suggests that we disregard the saw kerf in our calculations! The kerf is the difference between an abstract answer of 6, and a real-world answer of 5. How to allow for the kerfs in the calculations is precisely what this book should be teaching.

All told, though, I think this book has a useful place on your bookshelf. It would be perfect for a new carpenter who needs to brush up on basic math skills. All the pages are perforated, so you can pull out the tests (and the answers!) and administer them as students are ready, or let the carpenters work through it in their own time in their own way.

This is a math textbook, and consequently the reading is a little dry, but the constant use of building site terminology and materials helps keep the readers interested. They won't be asking, "What does this have to do with my job?" — it's all laid out there in front of them. ■