

CAREERS

F O R

**NUMBER
CRUNCHERS**
& Other
Quantitative Types

Is 3.14 your favorite kind of pi? Do people describe you as a math wiz? Fields such as technology, government service, financial analysis, computer programming, and information services need talented individuals with a knack for numbers. If you're a magician with mathematics, you'll find your dream job inside.

Second Edition

Rebecca Burnett



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VGM Careers for You Series



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Rebecca E. Burnett

Second Edition

VGM Career Books

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0-07-140048-6

The material in this eBook also appears in the print version of this title: 0-07-138725-0

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DOI: 10.1036/0071400486



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To my son, Bob,
a number cruncher in
spirit and profession.

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Foreword

Number crunchers are a unique breed. They appreciate the subtleties of statistics; they enjoy the logic of complex mathematical formulas. For number crunchers, quantitative puzzles are a challenge, not a chore.

If you share this enthusiasm for numbers, you may be looking for ways to apply your quantitative skills to a new career. If so, your options are nearly limitless. Finance, education, forestry, scientific research: every field needs number crunchers. Number crunchers balance our books; they predict the weather; they observe new scientific phenomena. So whatever your ultimate job description, developing and applying your number-crunching know-how can lead you to an exciting new career.

The Editors of VGM

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Acknowledgments

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Shelva Boyd	Teacher, Fellows Elementary School
Merle Brendeland	Purchasing Manager, Sauer-Sundstrand Company
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Careers for Number Crunchers

Where the Jobs Are

Would you just as soon work with numbers instead of words? While your friends struggle with calculators, do you solve problems in your head? Do you like to manipulate numbers—balancing equations, solving puzzles, calculating odds and probabilities? Do people seek you out because you're good with numbers, asking you to teach them how to approach a problem or interpret the tax tables?

This book will help you decide if a career with numbers is what you want. You have a great many choices about the forum in which you choose to work—private business and industry, the public sector (local, state, or federal government), or nonprofit organizations. You also have a range of choices in the fields; a few fields include accounting, banking, engineering, insurance, marketing, medicine, securities, and investments. And, finally, you have choices about combining the forum and the field. For example, you can work as a statistician for the U.S. Department of Labor or for Prudential Securities. You can work as an accountant for the Internal Revenue Service or for General Electric. You can teach computer science in a local high school or for the U.S. Navy. You can work as an appraiser for your local real estate tax board or for your state's Division of Natural Resources. You can work as the budget director for Pew Charitable Trusts or for the local community college. In other words, your possibilities are wide open. This book talks about number-crunching careers

by looking at some of the fields in which you can study and work because most of these fields have jobs in public, private, and non-profit forums.

Overall Requirements

In general, people who choose the jobs described in *Careers for Number Crunchers & Other Quantitative Types* need to have a facility with numbers. However, they also need some other important skills: the ability to think logically; the habit of neat, orderly work; and effective skills in oral and written communication. Over and over again, the professionals interviewed for this book stressed that understanding and communicating quantitative concepts were more important than being able to manipulate the numbers. They saw number crunching as a means to an end—necessary, but not the end in itself.

Jobs Tracking Debits and Credits

If you're interested in accounting, you might be well suited for a job that involves tracking debits and credits. The jobs introduced in Chapter 2 range from being a bookkeeper for an auto dealer to being an accountant who owns the company, from a tax manager for a national corporation to an attorney for the IRS. The most recent figures from the U.S. Department of Labor's Bureau of Labor Statistics indicate that positions in accounting are likely to grow about as fast as the average for all occupations through the year 2008. You will find thousands of job openings annually.

Jobs Managing Money and Cash Flow

A large number of careers require that you be skillful at managing money and cash flow. In general, such jobs involve not only

keeping track of how money is spent but also making recommendations about how to spend it. The jobs introduced in Chapter 3 range from a city administrator in a small Midwest community to a chief financial officer for a state lottery, from an office manager for a building supplies business to a bank teller.

Jobs Guiding Investments

If you're interested in the stock market and like the idea of investigating the potential growth of a company, you might enjoy a career that involves guiding investments. You might want to be a Wall Street account executive working for a major brokerage house, or you can use the same skills for working as an independent financial advisor. Chapter 4 discusses jobs such as mortgage officer, account executive, financial advisor, and credit counselor. The number of positions in fields such as securities and financial sales should grow much faster than the average for all occupations through 2008 as a result of the growing array and complexity of financial products.

Jobs Buying in the Workplace

If you like the pressure and excitement of working with people in a fast-paced environment as much as you like working with numbers, you might consider a career in which you will be buying. Chapter 5 identifies jobs such as buyers and purchasing agents. According to the most recent figures from the U.S. Department of Labor's Bureau of Labor Statistics, the demand through 2008 for buyers and purchasing agents will not keep up with the rising level of economic activity. Computers now do much of the paperwork involved in ordering, which has reduced the need for low-level buyers. The exception is buyers for grocery stores, since mergers and direct shipment do not affect this industry as drastically as they do others.

Jobs Marketing and Selling in the Workplace

People involved in some aspect of marketing or selling usually are confident and outgoing and able to get along with people. Chapter 6 identifies jobs in marketing research, retail and commercial sales, and insurance. According to the most recent figures from the U.S. Department of Labor's Bureau of Labor Statistics, the need through 2008 for some kinds of sales workers, such as real estate agents, brokers, and managers, is expected to grow more slowly than the average for all occupations.

Jobs Applying Quantitative Thinking

Many careers focus on problems that require numeric calculations and manipulations as part of the solutions. If this sort of mathematic investigation appeals to you, then you might enjoy using quantitative design as part of your work. In Chapter 7 you'll learn about the quantitative aspects of various kinds of computer programming and engineering. The employment opportunities for many types of engineers and technicians will be good through 2008. For example, more electrical and electronics engineers and technicians will be needed because of the increasing pace of innovation and the growing importance of electronics in many industries.

Jobs Calculating Probabilities and Risks

Maybe you've always wondered how insurance companies set rates depending on the demographic characteristics of their customers. If problems such as these interest you, then a career calculating probability and risk would give you the opportunity to solve similar problems. Chapter 8 describes jobs you might consider as an actuary or a statistician. Although employment