

LEARNING MADE EASY

3rd Edition



Online Practice Tests

ASVAB AFQT

for
dummies[®]
A Wiley Brand



Online practice
TESTS

One-year access to
8 ASVAB AFQT practice
tests with complete
answer explanations

Angie Papple Johnston
with Rod Powers



This book comes with access to more content online.

Test your knowledge with eight full-length
practice exams!

Register your book or ebook at
www.dummies.com/go/getaccess.

Select your product, and then follow the prompts
to validate your purchase.

You'll receive an email with your PIN and instructions.



ASVAB AFQT

3rd Edition with Online Practice

**by Angie Papple Johnston
with Rod Powers**

**for
dummies**[®]
A Wiley Brand

ASVAB AFQT For Dummies®, 3rd Edition with Online Practice

Published by
John Wiley & Sons, Inc.
111 River Street
Hoboken, NJ 07030-5774
www.wiley.com

Copyright © 2018 by John Wiley & Sons, Inc., Hoboken, New Jersey

Published simultaneously in Canada

No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, scanning or otherwise, except as permitted under Sections 107 or 108 of the 1976 United States Copyright Act, without the prior written permission of the Publisher. Requests to the Publisher for permission should be addressed to the Permissions Department, John Wiley & Sons, Inc., 111 River Street, Hoboken, NJ 07030, (201) 748-6011, fax (201) 748-6008, or online at <http://www.wiley.com/go/permissions>.

Trademarks: Wiley, For Dummies, the Dummies Man logo, Dummies.com, Making Everything Easier, and related trade dress are trademarks or registered trademarks of John Wiley & Sons, Inc., and may not be used without written permission. All other trademarks are the property of their respective owners. John Wiley & Sons, Inc., is not associated with any product or vendor mentioned in this book.

LIMIT OF LIABILITY/DISCLAIMER OF WARRANTY: WHILE THE PUBLISHER AND AUTHOR HAVE USED THEIR BEST EFFORTS IN PREPARING THIS BOOK, THEY MAKE NO REPRESENTATIONS OR WARRANTIES WITH RESPECT TO THE ACCURACY OR COMPLETENESS OF THE CONTENTS OF THIS BOOK AND SPECIFICALLY DISCLAIM ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. NO WARRANTY MAY BE CREATED OR EXTENDED BY SALES REPRESENTATIVES OR WRITTEN SALES MATERIALS. THE ADVICE AND STRATEGIES CONTAINED HEREIN MAY NOT BE SUITABLE FOR YOUR SITUATION. YOU SHOULD CONSULT WITH A PROFESSIONAL WHERE APPROPRIATE. NEITHER THE PUBLISHER NOR THE AUTHOR SHALL BE LIABLE FOR DAMAGES ARISING HEREFROM.

For general information on our other products and services, please contact our Customer Care Department within the U.S. at 877-762-2974, outside the U.S. at 317-572-3993, or fax 317-572-4002. For technical support, please visit <https://hub.wiley.com/community/support/dummies>.

Wiley publishes in a variety of print and electronic formats and by print-on-demand. Some material included with standard print versions of this book may not be included in e-books or in print-on-demand. If this book refers to media such as a CD or DVD that is not included in the version you purchased, you may download this material at <http://booksupport.wiley.com>. For more information about Wiley products, visit www.wiley.com.

Library of Congress Control Number: 2017949051

ISBN 978-1-119-41365-3 (pbk); ISBN 978-1-119-41355-4 (ebk); ISBN 978-1-119-41350-9 (ebk)

Manufactured in the United States of America

10 9 8 7 6 5 4 3 2 1

Contents at a Glance

Introduction	1
Part 1: Getting Started with the ASVAB AFQT	5
CHAPTER 1: Examining the AFQT	7
CHAPTER 2: Facing the AFQT Head-On	13
CHAPTER 3: Arming Yourself with a Study Plan	23
CHAPTER 4: Mastering the Art of Studying and Test-Taking	27
Part 2: Expressing Yourself and Understanding Others	37
CHAPTER 5: Developing a Solid Vocabulary	39
CHAPTER 6: The Word Knowledge Subtest	61
CHAPTER 7: Reading for Comprehension	67
CHAPTER 8: The Paragraph Comprehension Subtest	79
Part 3: Calculating Better Math Knowledge	87
CHAPTER 9: Knowing Your Math	89
CHAPTER 10: The Mathematics Knowledge Subtest	127
CHAPTER 11: Working with Word Problems	135
CHAPTER 12: The Arithmetic Reasoning Subtest	157
Part 4: AFQT Practice Exams	165
CHAPTER 13: Practice Exam 1	167
CHAPTER 14: Practice Exam 1: Answers and Explanations	185
CHAPTER 15: Practice Exam 2	209
CHAPTER 16: Practice Exam 2: Answers and Explanations	227
CHAPTER 17: Practice Exam 3	247
CHAPTER 18: Practice Exam 3: Answers and Explanations	265
CHAPTER 19: Practice Exam 4	285
CHAPTER 20: Practice Exam 4: Answers and Explanations	303
Part 5: The Part of Tens	323
CHAPTER 21: Ten Tips for a Better AFQT Score	325
CHAPTER 22: Ten Topics to Explore	331
Appendix: Matching ASVAB Scores to Military Jobs	335
Index	351

Table of Contents

INTRODUCTION	1
About This Book	2
Foolish Assumptions	2
Icons Used in This Book	3
Beyond the Book	3
Where to Go from Here	4
PART 1: GETTING STARTED WITH THE ASVAB AFQT	5
CHAPTER 1: Examining the AFQT	7
Getting a Close-Up View of the AFQT	7
Reaping the Benefits of Getting the Highest Possible Score	9
Establishing a Study Program	10
Guessing Smart	11
Using the Practice Exams to Your Advantage	11
CHAPTER 2: Facing the AFQT Head-On	13
Looking at the Big ASVAB Picture	13
The computerized ASVAB (CAT-ASVAB)	14
The pencil-and-paper test	15
Scoring the AFQT	16
Understanding raw scores	17
Computing the verbal expression score	17
Getting the AFQT score formula	17
Normalizing the percentile score	17
Making Sense of Minimum Qualifying Scores	17
Considering the AFQT tier categories	18
Making the military cut	18
Retaking the Test	19
Army	20
Air Force	20
Navy	20
Marine Corps	21
Coast Guard	21
CHAPTER 3: Arming Yourself with a Study Plan	23
Do You Have Enough Time?	23
Planning Your Study Strategy	24
8 weeks out: Figure out what you need most	24
6 weeks out: Take another test	25
4 weeks out: Surprise! Time for another test	25
2 weeks out: Five tests down (and three to go)	25
1 week out: Crunch time	26
The day before the test: Last-minute prep	26
CHAPTER 4: Mastering the Art of Studying and Test-Taking	27
Reading for Study	27
Checking out the survey, question, read, recall, and review method	28
Taking and reviewing notes	28

Putting Study Strategies to Work for You	29
Working with your own learning style	29
Getting the most out of your study time	31
Taking the Test: Putting Your Best Foot Forward	34
The day before	34
Test day	34

PART 2: EXPRESSING YOURSELF AND UNDERSTANDING OTHERS37

CHAPTER 5: Developing a Solid Vocabulary39

Growing Your Vocabulary	39
Reading more to learn more	40
Talking to people	40
Adding words to your vocabulary	40
Using puzzles and games to improve your vocabulary	41
You're on my list: Working with word lists	41
Getting flashes of memory with flashcards	43
Building a Word from Scratch	43
Rooting around for roots	44
Attaching prefixes and suffixes	45
A Word by Any Other Name: Surveying Synonyms and Antonyms	47
Getting Homogeneous with Homonyms	48
Flex Your Lexicon: Vocabulary Exercises	50
Practicing synonyms? It's all the same to me	50
Antithetic antonyms: The opposite of synonyms	50
Digging around word roots	51
Parsing prefixes: Defining the beginnings of words	52
Suffering through suffixes: The ends of words	52
Defining words from their context	53
Answers and Explanations	54

CHAPTER 6: The Word Knowledge Subtest61

Getting Acquainted with the Test Format	61
Bumping Up Your Test Score	62
Keeping an eye on the clock	63
Watching out for the evil homonym	63
Considering guessing	64
Trying On Some Sample Questions	65
Answers and Explanations	66

CHAPTER 7: Reading for Comprehension67

Taking Pointers about Points	67
Picking out the main point	68
Simplifying subpoints	69
Analyzing What You've Read	69
Say what? What does that passage mean?	69
Say it again, Sam: Paraphrasing	70
Improving Your Reading Comprehension Skills	70
Taking the time to read	70
Skimming and scanning	71
Looking for the main ideas and subpoints	72
Building your vocabulary	72
Paraphrasing	72
Remembering by reflecting	73

Speaking about Speed	73
Diving for Facts: Paragraph Comprehension Practice	73
Finding the main idea	73
Going on a fact-finding mission	74
Drawing conclusions on your own	76
Answers and Explanations	77
CHAPTER 8: The Paragraph Comprehension Subtest	79
Tackling the Test Format: Types of Questions	79
The treasure hunt	80
Getting the point	81
Dictionary	81
Deep thinking	82
Planning Your Attack	82
Surveying Sample Test Questions	83
Answers and Explanations	85
PART 3: CALCULATING BETTER MATH KNOWLEDGE	87
CHAPTER 9: Knowing Your Math	89
Making the Most of Math Terminology	90
The Heart of Math: Exploring Expressions and Equations	91
Keeping equations balanced	91
Obeying the order of operations	91
Mental math: Mixing it up with the commutative, associative, and distributive properties	92
Having Fun with Factors	94
Understanding types of factors	94
Finding prime factors	95
Looking at Least Common Multiples	95
Conquering the Fear of Fractions	96
Defining parts and types of fractions	97
Simplifying fractions	97
Multiplying fractions	98
Dividing fractions	98
Adding and subtracting fractions	99
Performing multiple operations	100
Converting fractions to decimals	100
Comparing fractions	101
Getting rational about ratios	102
Dealing with Decimals	102
Converting decimals to fractions	103
Adding and subtracting decimals	103
Multiplying decimals	104
Dividing decimals	104
Rounding	106
Perusing percents	106
Playing with Positive and Negative Numbers	106
Rooting for Roots and Powers	107
Advice about exponents	107
Roots	108
Scientific notation	110
Alphabet Soup: Tackling Algebra Review	110
Visiting variables	110
Following the rules of algebra	111

All Is Not Equal: Examining Inequalities	112
Solving Quadratics	114
Method 1: The square-root method	114
Method 2: The factoring method	114
Method 3: The quadratic formula	116
Knowing All the Angles: Geometry Review	116
Knowing all the angles	117
Common geometric shapes	117
Famous geometry formulas	119
You Got a Problem? Math Knowledge Exercises	120
Math terminology practice	120
Order of operations practice	121
Converting fractions and decimals	122
Solving equations and inequalities	122
Identifying formulas	123
Answers and Explanations	123

CHAPTER 10: The Mathematics Knowledge Subtest 127

Taking Stock of the Test Structure	127
Direct math questions	128
Math law questions	128
Combined questions	129
Planning Your Test Attack	129
Keeping an eye on the all-important clock	129
Doubling your chances by double-checking	130
Using the answer choices to your advantage	130
Playing the guessing game	131
Practice Makes Perfect: Sampling Some Practice Questions	132
Answers and Explanations	133

CHAPTER 11: Working with Word Problems 135

Making Sense of Word Problems	135
Setting Up the Problem	136
Getting organized	136
Understanding the problem	136
Identifying the information you need	137
Translating the problem	138
Trying Out Typical Word Problems	141
Age problems	142
Geometric problems	143
Coin problems	144
Travel problems	145
Investment/loan problems	147
Mixture problems	148
Percent problems	149
Work problems	150
Number problems	150
Practical Mathematics: Arithmetic Reasoning Exercises	151
Fact-finding to figure out which formulas to use	151
Real-world formula problems	152
Putting together tables to make calculations easier	153
Answers and Explanations	154

CHAPTER 12: The Arithmetic Reasoning Subtest	157
Looking at the Test Structure	157
Developing a Test Strategy	158
Keeping track of the time	158
Choosing an answer and checking it twice	159
Using the answer choices: There's more than one way to skin an equation	160
Logical guessing	160
Taking Arithmetic Reasoning out for a Spin	161
Answers and Explanations	163
PART 4: AFQT PRACTICE EXAMS	165
CHAPTER 13: Practice Exam 1	167
Answer Sheet for Practice Exam 1	169
Part 1: Arithmetic Reasoning	171
Part 2: Word Knowledge	175
Part 3: Paragraph Comprehension	178
Part 4: Mathematics Knowledge	182
CHAPTER 14: Practice Exam 1: Answers and Explanations	185
Part 1: Arithmetic Reasoning	185
Part 2: Word Knowledge	196
Part 3: Paragraph Comprehension	199
Part 4: Mathematics Knowledge	201
Answer Key	208
CHAPTER 15: Practice Exam 2	209
Answer Sheet for Practice Exam 2	211
Part 1: Arithmetic Reasoning	213
Part 2: Word Knowledge	217
Part 3: Paragraph Comprehension	220
Part 4: Mathematics Knowledge	223
CHAPTER 16: Practice Exam 2: Answers and Explanations	227
Part 1: Arithmetic Reasoning	227
Part 2: Word Knowledge	235
Part 3: Paragraph Comprehension	238
Part 4: Mathematics Knowledge	240
Answer Key	246
CHAPTER 17: Practice Exam 3	247
Answer Sheet for Practice Exam 3	249
Part 1: Arithmetic Reasoning	251
Part 2: Word Knowledge	255
Part 3: Paragraph Comprehension	258
Part 4: Mathematics Knowledge	261
CHAPTER 18: Practice Exam 3: Answers and Explanations	265
Part 1: Arithmetic Reasoning	265
Part 2: Word Knowledge	273
Part 3: Paragraph Comprehension	276
Part 4: Mathematics Knowledge	277
Answer Key	283

CHAPTER 19: Practice Exam 4	285
Answer Sheet for Practice Exam 4	287
Part 1: Arithmetic Reasoning	289
Part 2: Word Knowledge	293
Part 3: Paragraph Comprehension	296
Part 4: Mathematics Knowledge	299
CHAPTER 20: Practice Exam 4: Answers and Explanations	303
Part 1: Arithmetic Reasoning	303
Part 2: Word Knowledge	310
Part 3: Paragraph Comprehension	313
Part 4: Mathematics Knowledge	315
Answer Key	321
PART 5: THE PART OF TENS	323
CHAPTER 21: Ten Tips for a Better AFQT Score	325
Take Your Time Studying	325
Make a Study Plan	326
Use the Practice Exams to Your Advantage	326
Memorize Basic Math Formulas	326
Know the Math Order of Operations	327
Boost Your Vocabulary	328
Comprehend What You Read	328
Arrive at the Test Site Refreshed and Prepared	328
Watch the Clock	329
Guess Smart	329
CHAPTER 22: Ten Topics to Explore	331
For More about the ASVAB	331
For More about the Military	331
For More about Math	332
For More about Math Word Problems	332
For More about Vocabulary	332
For More about Reading Comprehension	333
For More about Test-Taking	333
Playing at Public Libraries	333
Consorting with Colleges	334
Trying Out a Tutor	334
APPENDIX: MATCHING ASVAB SCORES TO MILITARY JOBS	335
Army Enlisted Jobs	335
Air Force Enlisted Jobs	340
Navy Enlisted Jobs	342
Marine Corps Enlisted Jobs	345
Coast Guard Enlisted Jobs	349
INDEX	351

Introduction

Because you're reading this book, there's a very good chance that you're interested in joining the U.S. military. I say that because the military recruiting commands are the only people in the entire world who care about the Armed Forces Qualification Test (AFQT) score. The AFQT score is derived from four of the nine Armed Services Vocational Aptitude Battery (ASVAB) subtests. It's used to determine your overall qualification to join the military branch of your choice.

Perhaps you've read the best-selling *ASVAB For Dummies* (Wiley), or some other ASVAB prep book, and you want more practice so you can achieve the highest possible AFQT score. Maybe you've already taken the ASVAB, you want to retest for a higher AFQT score, and you're looking for an advantage. In any case, you've chosen the right book!

The ASVAB has two purposes: First, it's designed to tell the military whether you can cut it within its ranks. It's also designed to show the military where you'll shine as a service member. Four subtests of the ASVAB (Word Knowledge, Paragraph Comprehension, Mathematics Knowledge, and Arithmetic Reasoning) make up the AFQT. The same four subtests, plus the remaining five subtests, are used to determine the fields in which you're eligible to work. (There's no such thing as an Army astronaut. I've checked.)

Long gone are the days when someone could just walk into a recruiter's office and get into the military as long as he had a pulse. Today's all-volunteer military members are the cream of the crop. For example, did you know that under current regulations, you need a minimum of a high school education to join and that no more than 10 percent of all recruits can have a GED or other high-school equivalency certificate?

Something else you may not know: The military services can't just grow to whatever size they want. Like any other government agency, they have a budget, and they have to operate within that budget. Every year, when Congress passes the annual Defense Authorization Act, it tells each military branch how many members it's allowed to have at any given time. By law, the services can't go over the size mandated by congressional leaders (who hold the military purse strings).

Did you also know that of every ten people who walk into a military recruiter's office, only about three are allowed to enlist? Sure, some are disqualified because of medical history or criminal history, but many are turned away because their AFQT scores are too low or because other qualified applicants have higher AFQT scores.

Today's military is high-tech. Even the "common" infantry soldier has to learn how to use and maintain complicated electronic gadgets to survive on the battlefield. The services use the AFQT to determine whether someone is "trainable" in the high-tech military.

About This Book

Full-disclosure doctrine requires me to inform you that much of the information in this book can be found in *ASVAB For Dummies*. The AFQT is, after all, part of the ASVAB, and I wouldn't cheat you by putting part of the information in one book and part of the information in another.

So why should you spend some of your hard-earned money on this book, particularly if you've already bought *ASVAB For Dummies*? Because here you find expanded, more-detailed information about the AFQT and the four subtests that make up the AFQT score. If you're worried about your AFQT score, this book will help you get the highest score you can.

Even if you're not worried about your AFQT score, this book contains four — count 'em, four! — additional practice tests for the four most important subtests of the ASVAB. Extra practice is never a bad thing, as my high-school volleyball coach would say.

As you read through this book, you'll see a couple of special conventions:

- » Whenever I use a new term, I italicize the term and define it nearby, often in parentheses.
- » I put web addresses in monofont so you can easily distinguish them from the surrounding text.

When this book was printed, some web addresses may have needed to break across two lines of text. If that happened, rest assured that I haven't put in any extra characters (such as hyphens) to indicate the break. So when using one of these web addresses, just type in exactly what you see in this book, pretending the line break doesn't exist (or simply click the link if you're reading an e-book).

This book has a few sidebars (shaded boxes) sprinkled throughout. They're full of interesting information about topics described in those chapters, but you don't have to read them if you don't want to; they don't contain anything you must know about the AFQT, so if you're in a hurry, you can skip them. You can also skip anything marked with a Technical Stuff icon. Those tidbits are nonessential, too.

Foolish Assumptions

While writing this book, I made a few assumptions about you — namely, who you are and why you picked up this book. I assume the following:

- » You aren't an idiot. You just want information to help you get the highest AFQT score possible.
- » You're a high-school graduate, you have a high-school equivalency certificate, or you have at least 15 college credits. You just want to brush up on your high-school math and/or English skills as they apply to the AFQT. (If you aren't a high-school graduate or if you don't have a high-school equivalency certificate or at least 15 college credits, you need to get back to school. Very few applicants with a high-school equivalency certificate are allowed to enlist, and then only if they have 15 or more college credits.)
- » You want to join the U.S. military and want to take advantage of all the enlistment goodies that are available, such as enlistment bonuses or additional education benefits. Depending on current recruiting needs, the services often tie enlistment incentives to high AFQT scores. High AFQT scores also help you pick the job you want — and the job you want may be offering a high-dollar enlistment bonus.

Icons Used in This Book

Throughout this book you find icons — little pictures in the margins — that help you use the material in this book to your best advantage. Here’s a rundown of what they mean:



TIP

The Tip icon alerts you to helpful hints regarding the subject at hand. Tips can help you save time and score higher on the AFQT.



REMEMBER

The Remember icon highlights important information you should read carefully.



WARNING

The Warning icon flags information that may prove hazardous to your plans of acing the AFQT. Often, this icon accompanies common mistakes people make when taking the test or qualifying for enlistment. Pay special attention to the Warning icon so you don’t fall into a trap on the test.



EXAMPLE

The Example icon points out sample questions that appear in the review chapters.



TECHNICAL
STUFF

The Technical Stuff icon points out information that’s interesting, enlightening, or in-depth but that isn’t necessary for you to read. You don’t need this information to maximize your AFQT score, but knowing it may make you a better-informed test-taker — or at least help you impress your friends!

Beyond the Book

In addition to the book you’re reading right now, be sure to check out the free online Cheat Sheet for details on the AFQT scores you need to enlist in each branch of the military and some pointers on how to achieve a high score on the two math subtests. To get this Cheat Sheet, simply go to www.dummies.com and type “ASVAB AFQT” in the Search box.

The online practice that comes free with this book contains the four AFQT practice tests included in the book, plus four additional AFQT exams. The beauty of the online tests is that you can customize your online practice to focus on the areas that give you the most trouble. So if you need help with Paragraph Comprehension questions or Arithmetic Reasoning problems, just select those question types online and start practicing. Or if you’re short on time but want to get a mixed bag of a limited number of questions, you can specify the number of questions you want to practice. Whether you practice a few hundred questions in one sitting or a couple dozen, and whether you focus on a few types of questions or practice every type, the online program keeps track of the questions you get right and wrong so you can monitor your progress and spend time studying exactly what you need.

To gain access to the online practice, all you have to do is register. Just follow these simple steps:

1. **Register your book or ebook at Dummies.com to get your PIN. Go to www.dummies.com/go/getaccess.**
2. **Select your product from the dropdown 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

You don't have to read this book from cover to cover in order to maximize your AFQT score. If you decide to skip around, look over the table of contents and choose which topics you're interested in studying.

You may already know that you'll ace the Paragraph Comprehension subtest, so you want to brush up on word problems. If so, head to Chapters 11 and 12.

You may want to jump straight to Chapter 13 and take the first AFQT practice exam — that way, you can get an idea of which subjects you need to study more. Early on in your reading of the book, check out Chapter 2, which provides invaluable information regarding how the AFQT score is computed and how the score applies to military enlistment.

No matter where you start, I wish you all the best in your future military endeavors. I love every minute of being in the military, and I'm confident that you'll enjoy your time with us, too.

1

**Getting Started
with the ASVAB
AFQT**

IN THIS PART . . .

Get an overview of the ASVAB AFQT, how it's scored, and how to prepare for it.

Check out the differences between the paper and computerized tests, find out what your score means, and get details on the possibility of retaking the test.

Create a study plan to maximize your time between now and test day.

Figure out what study strategy works best for you, take advantage of study tips, and prepare yourself for test day.

- » Dissecting the AFQT
- » Checking out the advantages of a high AFQT score
- » Setting up a study plan
- » Using the practice tests correctly

Chapter 1

Examining the AFQT

If you're thinking about joining the U.S. military, your AFQT score may well be the most important score you achieve on any military test. Sure, it also helps determine which military jobs you're offered or whether you get promoted, but what good are those if you can't get into the military in the first place? You need a qualifying score on the AFQT, or you won't be allowed to enlist. You could be a young Rambo in the making, in perfect health and able to run 3 miles in 3 minutes, and none of that would matter if you didn't have a qualifying AFQT score.

The services have years and years of research to back up their policy of using the AFQT score as an enlistment qualification. Dozens of studies have shown that an individual's AFQT score is one of the most significant factors in determining whether a recruit will make it through basic training and his or her first enlistment period. It costs the military about \$55,935 to process a new recruit for enlistment and send that person through basic training (and that's not even including the cost of additional job-specific schooling after you've graduated), so you can see why the services want to maximize their chances of getting their money's worth.

Thankfully, with a little review, there's absolutely no reason that you shouldn't be able to score well on the AFQT. The score is, after all, composed of four areas that you studied intensely during your high-school years: basic math, math word problems, vocabulary, and reading. That's where *ASVAB AFQT For Dummies*, 3rd Edition, comes in. Other test-prep books, such as *ASVAB For Dummies* (Wiley), try to prepare you for the entire Armed Services Vocational Aptitude Battery (ASVAB) and may be a great addition to your review, but this book is specifically designed to help you boost the most important ASVAB score of all: the AFQT score.

Getting a Close-Up View of the AFQT

The AFQT isn't a stand-alone test. You can't just walk into a recruiter's office and say you want to take the AFQT. You have to take the entire ASVAB, which consists of nine separate subtests. Four of those subtests make up the score that's known as the *AFQT score*. The AFQT score determines whether you're qualified to join the service of your choice. (Turn to Chapter 2 for the minimum qualifying scores for each service.)

IN THE BEGINNING, THERE WAS NO AFQT

When you start basic training, you learn about military history. Why not start a little sooner and find out where this whole testing thing came from?

The Army began general testing of draftees during World War I. In order to provide a method for classifying these soldiers, the Army developed the Army Alpha Test, which consisted of 212 multiple-choice and true/false questions, including common-sense questions and vocabulary and arithmetic problems. But many of the draftees couldn't read or write, so the Army developed the Army Beta Test, which required little word knowledge and relied on pictures and diagrams. Nearly 2 million soldiers took one of these tests during World War I.

During World War II, the Army General Classification Test (AGCT) replaced the Alpha and Beta tests. The new test had 150 questions — mostly vocabulary and arithmetic. The AGCT was used by the Army and Marine Corps to assign recruits to military jobs. Of the 9 million soldiers and Marines who took this test during World War II, just over 60 percent could read and write above a third-grade level. During this time, a completely separate aptitude test was given to Navy recruits; it was called the Navy General Classification Test (NGCT). (The Air Force didn't have a test because the United States technically didn't have an Air Force as you know it today; the Air Force was part of the Army back then.)

In 1948, Congress required the Department of Defense to develop a uniform screening test to be used by all the services. In 1950, the Department of Defense came up with the Armed Forces Qualification Test (AFQT). This test consisted of 100 multiple-choice questions in areas such as math, vocabulary, spatial relations, and mechanical ability. The military used this test until the mid-1970s. In addition to the AFQT, service-specific tests classified prospective recruits into jobs. The Army Classification Battery, the Navy Basic Test Battery, and the Airman Qualification Examination (to name a few) were used for classification purposes from the late 1950s to the mid-1970s.

In the 1960s, as military jobs became more diverse and technical, the Department of Defense decided to develop a standardized military selection and classification test and administer it in high schools. That's where the ASVAB entered the picture. The first ASVAB test was given in 1968, but the military didn't use it for recruiting purposes for several years. In 1973, the draft ended and the nation entered the contemporary period, in which all military recruits are volunteers. That year, the Air Force began using the ASVAB; the Marine Corps followed in 1974. From 1973 to 1975, the Navy and Army used their own test batteries for selection and classification. In 1976, the ASVAB became the official military job classification test used by all services, and the AFQT score became the official entry standard.

Here are the four subtests that make up your AFQT score:

- » **Arithmetic Reasoning:** The Arithmetic Reasoning subtest consists of math word problems. The subtest is multiple-choice. On the computerized-adaptive test (the *CAT version* or *CAT-ASVAB*), which most applicants take, you get 39 minutes to correctly solve 16 questions. If you're taking the paper version, you get 36 minutes to solve as many of the 30 problems as you can. Chapter 11 leads you step-by-step through solving math word problems. Take a look at Chapter 12 for some tips on doing well on this subtest.
- » **Word Knowledge:** The Word Knowledge subtest is a vocabulary test, plain and simple. You have to find words that are "closest in meaning" or "most opposite in meaning" to underlined words in the question stem. You have to define 16 words in 8 minutes on the CAT-ASVAB or define 35 words in 11 minutes on the paper version. You can boost your vocabulary knowledge by following the advice in Chapter 5 and get an idea of what the subtest is all about in Chapter 6.

- » **Paragraph Comprehension:** The Paragraph Comprehension subtest requires you to read a paragraph and then answer one to four questions about information contained in that paragraph. The computerized version has 11 questions in all, and you're expected to complete the subtest in 22 minutes; the paper version has 15 questions you have to power through in 13 minutes. Chapter 7 can help you sharpen your reading comprehension skills, and you can get a little practice with the Paragraph Comprehension subtest in Chapter 8. (**Note:** Many other standardized tests refer to this type of question as "reading comprehension." The military likes to do things its own way, so it refers to them as "paragraph comprehension" questions. Different name, same thing.)
- » **Mathematics Knowledge:** This subtest measures your ability to solve high-school level math problems. You have to solve 16 basic math problems in 20 minutes on the CAT-ASVAB or 25 questions in 24 minutes on the paper version. Like the other subtests of the AFQT, all the questions are multiple-choice. To make sure your math skills measure up, see Chapter 9. Chapter 10 gives you an idea about the test format as well as a little extra math practice.



REMEMBER

The AFQT isn't the only qualifying standard the military uses. You have to meet all set standards in order to qualify for enlistment, including age, height and weight, number of dependents, medical history, education level, and criminal history.

Reaping the Benefits of Getting the Highest Possible Score

Chapter 2 gives you the minimum AFQT qualifying scores for each service. But you don't want to be satisfied with making just the minimum. You want to score as high as possible.

The services put great stock in your AFQT score. Not only does a high AFQT score give you a greater chance of enlistment, but it also means you may have access to special incentives, such as the following:

- » **Enlistment bonuses and benefits:** Depending on current recruiting needs, individual services often tie the AFQT score to enlistment incentives, such as monetary bonuses or education benefits. For example, the Army often requires a minimum AFQT score of 50 to qualify for a bonus or to qualify for the Student Loan Repayment Program and other programs and benefits.
- » **More access to desirable jobs:** Most military jobs are tied to individual line scores derived from the entire ASVAB, but certain enlistment programs sometimes require a minimum AFQT score that is significantly higher than the minimum score needed for a regular enlistment. For example, some Navy jobs (such as those in the nuclear field) require a higher AFQT score.
- » **Education level:** You have to have a high school diploma in order to join any of the services. The services can, however, take a limited number of applicants with high school equivalency certificates each year. To qualify with one of these certificates, you must often score higher on the AFQT than a qualified high school diploma holder.
- » **Quotas:** When the services are doing well meeting their recruitment goals, they run out of space before they run out of applicants. At these times, the services get to pick and choose whom they let join and whom they don't. Branches commonly raise their AFQT minimum scores temporarily to separate the best-qualified applicants from the rest. Sometimes enlistment gets so competitive that the services require a minimum score of 50 just to consider you. As of this writing, minimum scores for the services tend to rest in the 30s.

» **Waivers:** One past study indicated that only three out of ten people who walked into a recruiter's office were qualified for enlistment. Certain factors — such as criminal history, age, education level, number of dependents, or medical history — made them ineligible. Some of these eligibility criteria can be waived (sometimes with difficulty and processing delays). However, when the military grants a waiver, it's taking a chance on an otherwise ineligible recruit. For example, if you have criminal misdeeds in your past and require a waiver to enlist, a service is much more likely to grant the waiver if you score 85 on the AFQT than it is if you score 45.



WARNING

Enlistment standards, programs, quotas, and incentives change — sometimes on a week-by-week basis, depending on the service's current recruiting needs. For the latest information, check with a military recruiter.

The AFQT is scored as a percentile. That means, for example, that if you score 70, you've scored as well as or higher than 70 percent of the people whose knowledge yours was measured against. The highest possible score on the AFQT is 99.



TIP

The AFQT isn't a one-shot deal. If you don't achieve a qualifying score, you can retest. After your first test, you have to wait at least 30 days to take a second test. After the second test, in most cases, you have to wait six months before you can test again. Keep in mind the age requirements and needs of the service. Although you can retest, getting a qualifying score upfront is the best way to keep your recruiter happy and your training and placement on schedule.

Establishing a Study Program

If you're not planning to make a study plan, you should plan again. A study plan is essential if you want to score well on the AFQT, so check out the guidelines in Chapter 3. You can adjust the schedule based on how much time you have left before you take the ASVAB.

I can't give you one best way to prepare a study plan. Each person has his or her own learning preferences; what works for you might not work for your best friend. Some people learn better by hearing information, while others like a visual approach — and still others need to put their hands on learning materials to get a good mental grasp on the information.

When you're studying for the ASVAB, you most likely won't put too much emphasis on learning new information. It's more of a review of what you already know, which means you have the freedom to find study techniques that help you remember best — until you've taken the test and left MEPS with your shiny new enlistment contract, that is.

Try to figure out what type of learner you are before developing a plan of study. Chapter 4 can help with this process and give you some tips about what to include in your study plan based on your learning style.



WARNING

Most people don't look forward to sitting down for a study session. Because of that, they try to make studying more enjoyable by spending time on the subjects they already know. After all, studying familiar information is much easier than learning something new. Try not to fall into this trap! If you're already an avid reader, you probably don't need to spend much of your time improving your reading comprehension skills. You're already going to ace that portion of the AFQT, right? Instead, spend most of your time boning up on the areas where you need improvement, such as math and math word problems.



TIP

Try to dedicate one to two hours per day to your AFQT studies. Pick a time and place where nobody will interrupt you. Having your dad yell at you to cut the grass probably won't be beneficial to your study session. Also, turn off your cellphone. Is that call as important as your future military career? You won't be allowed to use your phone in basic training anyway, so this is a good time to get into the habit of letting it go for a while.

Guessing Smart

All the questions on the ASVAB are multiple-choice with four possible answers. That means that if you narrow down the possible correct answers by eliminating at least one *incorrect* answer, you'll boost your chances at scoring higher on the test.

Of course, you can increase these odds immensely by studying. But the chances are good that no matter how much time you put into advanced study, you'll come across at least one question on the test that leaves you scratching your head.



TIP

You can improve your odds of guessing correctly by guessing smart. Chapter 4 includes tips and techniques about smart guessing in general. Flip to Chapter 6 for tips on intelligent guessing for the Word Knowledge subtest, to Chapter 8 for techniques you can use on the Paragraph Comprehension subtest, to Chapter 10 for Mathematics Knowledge subtest guessing plans, and to Chapter 12 to discover how to make intelligent guesses on the Arithmetic Knowledge subtest.

Using the Practice Exams to Your Advantage

This book includes four full-length AFQT practice exams, with questions that are very similar to the ones you see on the ASVAB subtests that make up the AFQT score. The practice exams included in this book can help increase your confidence and ensure that you're ready to take the actual ASVAB, but you have to use them correctly.

I'll let you in on a little not-so-secret secret: No ASVAB or AFQT preparation book includes the exact same questions as what you'll find on the actual test. Not only would that be unethical, but it would probably also result in several federal law-enforcement agents knocking on the author's door — not my idea of a good time. Actual ASVAB test questions are controlled items; that means that the military keeps them to itself, and people can get into heaps of trouble for sharing them. If you see any questions on the actual ASVAB or AFQT that are the same as the ones you find in this book (or any other preparation guide), it's pure coincidence.



TIP

Just because the practice exams don't include the same questions you see on the AFQT doesn't mean that the practice exams aren't valuable — just use them the way they were designed to be used:

- » **Practice Exam 1:** The first practice test is intended as an initial assessment tool. Take this test before you set up your study plan. You can use the results of Practice Exam 1 to determine which areas of the AFQT you need to spend the most time on.
- » **Practice Exam 2:** Use this test as a progress check after a week or two of study. Adjust your study plan accordingly.
- » **Practice Exam 3:** Take this practice exam about a week before you're scheduled to take the actual ASVAB. Use the results to determine which AFQT subjects need a little extra attention.

- » **Practice Exam 4:** Take the final practice exam a day or two before the ASVAB to make sure you're ready and to boost your confidence. If you don't score well, you may want to ask your recruiter to reschedule your ASVAB test for a later date to give you more time to study.

You may find your recruiter trying to rush you to take the ASVAB and medical exam so he can get you signed up quickly. Recruiters live and die off their recruiting goals. Make sure you don't let the recruiter schedule your exam until you're sure you're ready to take the test.



TIP

The mini-AFQT computerized test (see Chapter 2) that recruiters have in their offices is a pretty good indicator of whether you're ready for the real test. Usually, people's AFQT scores are within five or six points of what the mini-AFQT predicts.



REMEMBER

Although you can't equate scores on the practice exam with actual AFQT scores (because of the method of scoring the AFQT; see Chapter 2), shoot for a minimum of 80 percent on each subtest, keeping in mind that the practice exams in this book mimic the paper version of the test. When you're taking the practice tests in this book, here's what you need to make a B grade:

- » **Arithmetic Reasoning:** You need to answer 24 of the 30 Arithmetic Reasoning questions correctly to hit the 80 percent threshold. If you don't, dedicate more study time to solving math word problems.
- » **Word Knowledge:** The Word Knowledge subtest has 35 questions, so focus on this section if you miss more than 7 of them.
- » **Paragraph Comprehension:** If you miss more than 3 of the 15 questions on the Paragraph Comprehension subtest, dedicate more study time to your reading skills.
- » **Mathematics Knowledge:** Missing more than 3 of the 16 Mathematics Knowledge questions puts you below 80 percent, so you'll need further study.

- » Considering computer versus paper tests
- » Understanding how the AFQT is scored
- » Knowing what score you need to enlist
- » Taking the test again to get a better score

Chapter 2

Facing the AFQT Head-On

Everyone looking to enlist in the U.S. military has to take the Armed Services Vocational Aptitude Battery (ASVAB). The ASVAB consists of nine separately timed subtests, which the military primarily uses to determine your aptitude to learn various military jobs.

Four of the ASVAB subtests are used to compute the Armed Forces Qualification Test (AFQT) score. This score determines whether you're qualified to join the military service of your choice. Each branch of military service has its own minimum AFQT score standards. Your AFQT score tells the military what your chances are of making it successfully through your enlistment period. The services have conducted countless studies over the years, and the results are clear: The higher your AFQT score, the greater the chances that you'll successfully complete your enlistment contract.

As you can imagine, the AFQT score is very important to the military recruiting commands. If you have a high AFQT score, you can expect your recruiter to be wining and dining you, offering you all kinds of enlistment incentives, and telling all his coworkers that you're his very best friend. On the other hand, if your AFQT score is below the minimum standards set by that service, you can expect your recruiter to say, "Don't call us. We'll call you." If you have a qualifying AFQT score that's mediocre, you can probably still enlist, but you'll most likely miss out on many enlistment goodies, such as enlistment bonuses. (Maybe you'll get a free T-shirt.)

In this chapter, I explain which of the four ASVAB subtests are used to compute your AFQT score and how the military calculates the score. I also tell you the minimum qualifying AFQT scores for each service branch and explain how you can request a retest if your score is too low.

Looking at the Big ASVAB Picture

Depending on where and why you take the test, you may encounter two different versions of the ASVAB: the computerized version and the pencil-and-paper version.

The computerized version of the ASVAB (CAT-ASVAB) contains nine separately timed subtests. On the CAT-ASVAB, Auto Information and Shop Information are separated into two different tests, whereas they're combined on the paper version. In Table 2-1, I outline the nine ASVAB subtests in the order that you take them; the bolded subtests are used to calculate the AFQT score.

TABLE 2-1 Details about the ASVAB Subtests

Subtest	Questions/Time (CAT-ASVAB)	Questions/Time (Paper Version)	Content
General Science	16 questions, 8 minutes	25 questions, 11 minutes	General principles of biological and physical sciences
Arithmetic Reasoning	16 questions, 39 minutes	30 questions, 36 minutes	Math word problems
Word Knowledge	16 questions, 8 minutes	35 questions, 11 minutes	Correct meaning of a word and best synonym or antonym for a given word
Paragraph Comprehension	11 questions, 22 minutes	15 questions, 13 minutes	Questions based on paragraphs (usually a few hundred words) that you read
Mathematics Knowledge	16 questions, 20 minutes	25 questions, 24 minutes	High school math
Electronics Information	16 questions, 8 minutes	20 questions, 9 minutes	Electricity and electronic principles and terminology
Mechanical Comprehension	16 questions, 20 minutes	25 questions, 19 minutes	Basic mechanical and physical principles
Auto and Shop Information	11 Auto Information questions, 7 minutes; 11 Shop Information questions, 6 minutes	25 questions, 11 minutes	Knowledge of automobiles, shop terminology, and tool use
Assembling Objects	16 questions, 16 minutes	25 questions, 15 minutes	Spatial orientation

You can't take just the four AFQT subtests of the ASVAB. You have to take all nine subtests in order to get a qualifying AFQT score. The military isn't set up to give *partial* ASVAB tests. For example, if you take the ASVAB and get line scores that qualify you for the military job you want but your AFQT score is too low to join, you have to retake the entire ASVAB — not just the four subtests that make up the AFQT — to get a higher AFQT score.



REMEMBER

During the initial enlistment process, your service branch determines your military job or enlistment program based on the minimum *line scores* it has established. Line scores are computed from the various subtests of the ASVAB. If you get an appropriate score in the appropriate areas, you can get the job you want — as long as that job is available and you meet other qualification factors.

The computerized ASVAB (CAT-ASVAB)

Nobody really cares about the AFQT score except the military — and it cares *a lot!* Because you're reading this book, I'm willing to bet that you're interested in joining the military. And if you're interested in joining the military, you'll most likely take the computerized version of the ASVAB. That's because most people taking the ASVAB for the purpose of joining the military take it at a Military Entrance Processing Station (MEPS), and all these places use the computerized test.

The computerized version of the ASVAB — called the *CAT-ASVAB* (*CAT* stands for Computerized Adaptive Testing) — has the same questions as the paper version. The *CAT-ASVAB* adapts the questions it offers you based on your level of proficiency. (That’s why it’s called *adaptive*.) The first test question is of average difficulty. If you answer this question correctly, the next question is more difficult. If you answer the first question incorrectly, the computer gives you an easier question. (By contrast, on the pencil-and-paper ASVAB, easy, medium, and hard questions are presented randomly.) On the ASVAB, harder questions are worth more points than easier questions are, so you want to get to them sooner to maximize your score.

Pros of taking the CAT-ASVAB

Maybe it’s because most people are more comfortable in front of a computer than they are with paper and pencil, but military recruiters have noted that among applicants who’ve taken both the paper-based version and the computerized version of the ASVAB, recruits tend to score slightly higher on the computerized version of the test.

When you take the *CAT-ASVAB*, the computer automatically calculates and prints your standard scores for each subtest and your line scores for each service branch. (If you’re interested in line scores, which are used for military job-classification purposes, you may want to pick up a copy of *ASVAB For Dummies* [Wiley].) This machine is a pretty smart cookie; it also calculates your AFQT score on the spot. With the computerized version, you usually know whether you qualify for military enlistment on the same day you take the test and, if so, which jobs you qualify for.

Cons of taking the CAT-ASVAB

Unlike the pencil-and-paper version, you can’t skip questions or change your answers after you enter them on the *CAT-ASVAB*. This restriction can make taking the test harder for some people. Instead of being able to go through and immediately answer all the questions you’re sure of and then come back to the questions that require you to do some head scratching, you have to answer each question as it comes. Also, judging how much time to spend on a difficult question before guessing and moving on can be tough. Finally, if you have a few minutes at the end of the test, you can’t go back and check to make sure you marked the correct answer to each question.

The pencil-and-paper test

Most people who take the pencil-and-paper version of the ASVAB do so under the *ASVAB Career Exploration Program*, a cooperative program between the Department of Education and the Department of Defense at high schools all across the United States. Although the results of this version can be used for military enlistment purposes (if taken within two years of enlistment), its primary purpose is to serve as a tool for guidance counselors to use when recommending possible careers to high school students.

You can also take the pencil-and-paper version for purposes of enlistment through a recruiter, but that’s not done very often these days. In unusual circumstances, when it’s impractical for an applicant to travel to a MEPS location, recruiters can make arrangements for applicants to take the pencil-and-paper version at a Military Entrance Test (MET) site.



Another version of the ASVAB is the Armed Forces Classification Test (AFCT). This version is used by folks already in the military who want to improve their ASVAB scores for the purposes of retraining for a different military job. Except for the name of the exam, the AFCT is exactly the same as the other versions of the ASVAB.

THE MINI-AFQT

You may take a sort of “mini-AFQT” in the recruiter’s office. This test is called the Computer Adaptive Screening Test (CAST). Another version in use is called the Enlistment Screening Test (EST).

The CAST and EST aren’t qualification tests; they’re strictly recruiting tools that recruiters may use at their discretion. The CAST and EST contain questions similar (but not identical) to questions appearing on the ASVAB. They help estimate an applicant’s probability of obtaining a qualifying AFQT score. If you take one of these mini-tests and score low, you probably don’t want to take the actual ASVAB until you’ve put in some extensive study time. In fact, many recruiters won’t even schedule you for the ASVAB unless you score well on the CAST or EST.

Pros of taking the paper-and-pencil test

The paper-based test allows you to skip questions that you don’t know the answer to and come back to them later. You can’t do that on the CAT-ASVAB. This option can be a real help when you’re racing against the clock and want to get as many answers right as possible. You can change an answer on the subtest you’re currently working on, but you can’t change an answer on a subtest after the time for that subtest has expired.

You can mark up the exam booklet as much as you want. If you skip a question, you can circle the number of the question in your booklet to remind yourself to go back to it. If you don’t know the answer to a question, you can cross off the answers that seem unlikely or wrong to you and then guess based on the remaining answers.

Cons of taking the paper-and-pencil test

On the pencil-and-paper version, harder questions are intermingled with easier questions, so you may find yourself spending too much time trying to figure out the answer to a question that’s too hard for you, and you may miss answering some easier questions at the end of the subtest because you ran out of time. The result: Your overall score will be lower.

The paper answer sheets are scored by an optical scanning machine. The machine has a conniption when it comes across an incompletely filled-in answer circle or stray pencil marks and will often stubbornly refuse to give you credit for these questions, even if you answered correctly.

Scoring the AFQT

The military uses some pretty complicated calculations to determine applicants’ AFQT scores. Because harder questions carry more weight than easy questions do, the military can’t give you a letter grade or a percentage of questions that you answered correctly; that wouldn’t tell the armed forces exactly how much you know about each subject.



Lots of people (mistakenly) call the AFQT score their “ASVAB score.” You commonly hear someone say, “I got a 67 on the ASVAB,” or “My ASVAB score was 92.” That’s not correct; it implies that the AFQT is derived from all nine subtests of the ASVAB, and it’s not. The AFQT score is computed from just four of the ASVAB subtests — the four subtests of the ASVAB that measure your math and vocabulary and reading skills (see “Looking at the Big ASVAB Picture” earlier in this chapter).

In this section, I explain how the AFQT is scored.