

Chapter 1

The ASVAB in a Nutshell

In This Chapter

- ▶ Checking out the different versions of the ASVAB
- ▶ Figuring out what each subtest covers
- ▶ Computing the Armed Forces Qualification Test (AFQT) score
- ▶ Taking the ASVAB again

The Armed Services Vocational Aptitude Battery (ASVAB) consists of nine individual tests that cover subjects ranging from general science principles to vocabulary. Your ASVAB test results determine whether you qualify for military service (that part is so important it has its own name — the AFQT) and, if so, what jobs you qualify for. The ASVAB isn't an IQ test. The military isn't trying to figure out how smart you are. The ASVAB specifically measures your ability to be trained to do a specific job.

The famous Chinese General, Sun Tzu said, "Know your enemy." In order to develop an effective plan of study and score well on the ASVAB, it's important to understand how the ASVAB is organized and how the military uses the scores from the nine subtests. This chapter describes the different versions of the ASVAB, the organization of the subtests, how the AFQT score is calculated, and the various service policies for retaking the ASVAB.

An ASVAB by Any Other Name: Different Faces of the ASVAB

The ASVAB comes in many flavors, depending on where and why you take it. You would think that after more than 25 years in existence, the test could've been whittled down to one single version by now. But don't get too confused about the different versions, though. The bullets that follow boil down to choices:

- ✓ **Institutional version:** You take this pencil-and-paper version of the ASVAB as a junior or senior in high school; it's administered through a cooperative program between the Department of Education and the Department of Defense at high schools all across the United States (U.S.).

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 provide a tool for high school guidance counselors to use when recommending possible civilian career areas to high school students. For example, if a student scores high in electronics, the counselor can recommend electronic career paths. If a student is interested in military service, the counselor then refers her to the local military recruiting offices.

- ✓ **Production version:** If you take the ASVAB through a military recruiter, you're taking the production version. This version of the ASVAB is used by all of the military branches for the sole purpose of enlistment qualification and to determine which military jobs a recruit can successfully be trained in. The production version is available in two formats: paper and computerized. The vast majority of applicants are processed

through a Military Entrance Processing Station (MEPS), where they take the computerized version of the ASVAB (called the CAT-ASVAB, short for *computer-adaptive testing ASVAB*), undergo a medical physical, and run through a security screening all in one trip. However, in a few cases, testers are offered the paper version, which is given by MEPS personnel at several remote testing sites throughout the U.S.

- ✓ **Computer Adaptive Screening Test (CAST) or Enlistment Screening Test (EST):** These tests are sort of mini-ASVABs you may take in the recruiter's office. The EST and CAST aren't qualification tests; they're strictly recruiting tools. These tests are management screening tools that may be administered at the discretion of the recruiter. The EST and CAST contain questions similar to, but not identical with, questions appearing on the ASVAB. They're used to help estimate an applicant's probability of obtaining qualifying ASVAB scores.



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 (and this book can help with that).

- ✓ **Armed Forces Classification Test (AFCT):** This version is given in-house to those people already in the military. At some point during your military career, you may wish to retrain for a different job. If you need higher ASVAB scores to qualify for such retraining, you can take the AFCT. Except for the name of the exam, the AFCT is exactly the same as the other versions of the ASVAB. This version is currently available only in pencil-and-paper format, but the military plans to replace it with a computerized version in the near future.

Mapping Out the ASVAB Subtests

The computerized format of the ASVAB contains nine separately timed subtests. The paper format of the test only has eight subtests. The Assembling Objects (AO) subtest isn't included on any of the paper versions (for information on the AO subtest, see Chapter 14). In Table 1-1, the nine ASVAB subtests are outlined in the order that you take them; you can also see what chapters to turn to when you want to review that content.

Table 1-1		The ASVAB Subtests in Order		
Subtest	Questions	Time (Minutes)	Content	Chapter
General Science (GS)	25	11	General principles of biological and physical sciences	Chapter 10
Arithmetic Reasoning (AR)	30	36	Simple word problems that require simple calculations	Chapter 7
Word Knowledge (WK)	35	11	Correct meaning of a word; occasionally antonyms (words with opposite meanings)	Chapter 4
Paragraph Comprehension (PC)	15	13	Questions based on several paragraphs (usually a few hundred words) that you read	Chapter 5
Mathematics Knowledge (MK)	25	24	High-school math, including algebra and geometry	Chapter 8
Electronics Information (EI)	20	9	Electrical principles, basic electronic circuitry, and electronic terminology	Chapter 13

Subtest	Questions	Time (Minutes)	Content	Chapter
Mechanical Comprehension (MC)	25	19	Basic mechanical and physical principles	Chapter 12
Auto & Shop Information (AS)	25	11	Knowledge of automobiles, shop terminology, and tool use	Chapter 11
Assembling Objects (AO)*	16	15	Spatial orientation	Chapter 14

*Only included on the CAT-ASVAB

The AFQT: Your Most Important Score

The ASVAB doesn't have an overall score. When you hear someone say, "I got an 80 on my ASVAB," that person is talking about the Armed Forces Qualification Test (AFQT) score, not an overall ASVAB score. The AFQT score determines whether you qualify to even enlist in the military, and only four of the nine subtests are used to compute it: Word Knowledge, Paragraph Comprehension, Arithmetic Reasoning, and Mathematics Knowledge.

Doing well on some of the other subtests is a personal-choice type of issue. Some of the subtests are used only to determine the jobs you qualify for. (See Chapter 2 for more information on how the military uses the individual subtests.) So you have to figure out which areas to focus on based on your career goals. Here's an example: If you're not interested in a job requiring a score on the Mechanical Comprehension subtest, you don't need to worry about doing well on that subtest. So, as you're preparing for the ASVAB, remember to plan your study time wisely. If you don't need to worry about mechanical comprehension, don't bother with that chapter in this book. Spend the time on word knowledge or arithmetic reasoning.

Tracing the testing trail

In 1948, Congress made the Department of Defense develop a uniform screening test to be used by all the services. The Defense Department 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. Each branch of the service sets its own minimum score.

When the military decides to do something, it often acts with the lightning speed of a snail carrying a backpack. In the 1960s, the Department of Defense decided to develop a standardized military selection and classification test and administer it in high schools. That's where your old buddy, the ASVAB, came from. 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. In 1976, the ASVAB became the official entry test used by all services.

The ASVAB remained unchanged for several years until in 1980 when the ASVAB underwent its first revision. The subtest areas remained the same, but several of the questions were updated to keep up with changes in technology.

In 1993, the computerized version was released for limited operational testing, but it didn't begin to see wide-scale use until 1996. The questions on the computerized version of the ASVAB were identical to the questions on the paper version. It wasn't until the end of 2002 that the ASVAB finally underwent a major revision. Two subsets (Coding Speed and Numerical Operations) were eliminated and a new subtest (Assembling Objects, Chapter 14) was added to the computerized version. Also during the 2002 revision, all of the questions were updated, and the order in which the subtests were given was changed. The revised ASVAB was first rolled out in the computerized format, and the paper versions of the test were updated during the next year.



If you don't know what kind of job you want to do in the military, the ASVAB helps you and the military determine your potential ability for different types of jobs. If you're in this situation, review all the chapters in this book, brushing up on the basic principles of everything from science to electronics, but focus on the four subtests that enable you to qualify for enlistment: Word Knowledge, Paragraph Comprehension, Arithmetic Reasoning, and Mathematics Knowledge. Following this plan ensures a relatively accurate appraisal of your aptitude for various military jobs.

Interpreting the Multitude of Scores

The Department of Defense is an official U.S. Government agency, so (of course) it can't keep it simple. When you receive your ASVAB score results, you won't see just one score; you'll see several. Figure 1-1 shows an example of an ASVAB score card used by high school guidance counselors. (For those people who take the institutional version — see “An ASVAB by Any Other Name: Different Faces of the ASVAB” for details.)

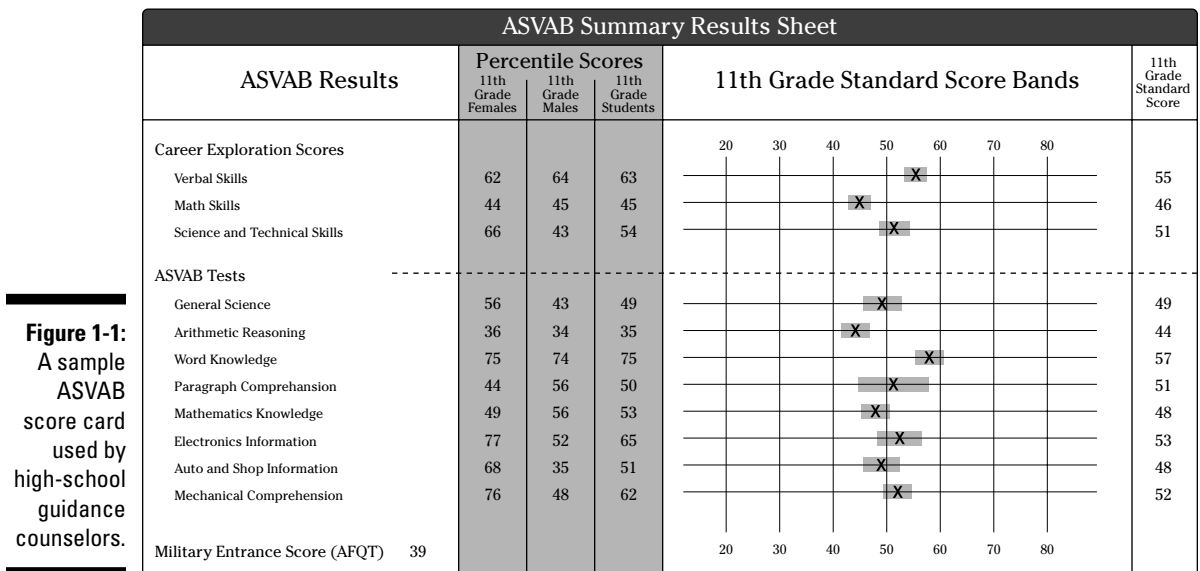


Figure 1-2 depicts an example of an ASVAB score card used for military enlistment purposes.

So, what do all these different scores actually mean? Check out the following sections to find out.

Defining all the scores

When you take a test in high school, you usually receive a score that's pretty easy to understand — A, B, C, D, or F. If you do really well, the teacher may even draw a little smiley face on the top of the page. If only your ASVAB scores were as easy to understand.

SAMPLE CAT-ASVAB TEST SCORE REPORT

Testing Site ID: 521342

Service: AF

Testing Session: Date: 2007/02/24

Starting Time: 15:30

Applicant: Jane P. Doe

SNN: 333-33-3333

Test Form: 02E

Test Type: Initial

Standard Scores:	GS	AR	WK	PC	MK	EI	AS	MC	AO	VE
	63	59	60	52	56	81	64	62	52	58

COMPOSITE SCORES:

Army:	GT	CL	CO	EL	FA	GM	MM	OF	SC	ST
	118	121	128	130	127	132	134	129	128	125

Air Force:	M	A	G	E
	91	76	83	96

Navy/CG:	GT	EL	BEE	ENG	MEC	MEC2	NUC	OPS	HM	ADM
	117	259	234	120	185	173	235	225	177	114

Army:	MM	GT	EL
	139	122	134

Figure 1-2:
A sample
ASVAB
score card
used for
military
enlistment
purposes.

SAMPLE CAT-ASVAB TEST SCORE REPORT

In the following list, you see how your ASVAB test scores result in several different kinds of scores:

✓ **Raw score:** This score is the total number of points you receive on each subtest of the ASVAB. Harder questions on the ASVAB are worth more points than easier questions. While you won't see your raw scores on the ASVAB score cards, they're used to calculate the other scores.

✓ **Standard scores:** The various subtests of the ASVAB are reported on the score cards as standard scores. A standard score is calculated by converting your raw score based on a standard distribution of scores with a mean of 50 and a standard deviation of 10.

Don't confuse a standard score with the graded-on-a-curve score you may have seen on school tests — where the scores range from 1 to 100 with the majority of students scoring between 70 and 100. With standard scores, the majority score is between 30 and 70. That means that a standard score of 50 is an average score and a score of 60 would be an above average score.

✓ **Percentile scores:** These scores range from 1 to 99. They express how well you did in comparison with another group called the *norm*. On the institutional version's score card, the norm is fellow students in your same grade (except for the AFQT score).

On the production and institutional versions' score cards, the AFQT score is presented as a percentile score with the score normed by using the *1997 Profile of American Youth*, a national probability sample of 18- to 23-year-olds who took the ASVAB in 1997. For example, if you receive a percentile score of 72, you can say you scored as well as or better than 72 out of 100 of the norm group who took the test. (And by the way, this statistic from 1997 isn't a typo. The ASVAB was last "re-normed" in 2004, and the sample group used for the norm was those folks who took the test in 1997.)



- ✓ **Composite scores (also referred to as line scores):** Composite scores are individually computed by each service branch. Each branch has its own particular system when compiling various standard scores into individual composite scores. These scores are used by the different branches to determine job qualifications. Much more about this in Chapter 2.



You can't use the practice tests in this book (or any other ASVAB study guide) to calculate your probable ASVAB score. ASVAB scores are calculated by using raw scores, and raw scores aren't determined simply from the number of right or wrong answers. On the actual ASVAB, harder questions are worth more points than easier questions.

Understanding the big four: Your AFQT scores

The four scores that comprise your AFQT score include the Word Knowledge, Paragraph Comprehension, Arithmetic Reasoning, and Mathematics Knowledge subtests of the ASVAB. The military brass (or at least its computers) determines your AFQT score through a very particular process:

1. Add the value of your Word Knowledge score to your Paragraph Comprehension score.
2. Convert the result of Step 1 to a scaled score, ranging from 20 to 62.
This score is known as your *Verbal Expression* or VE score.
3. To get your *raw AFQT score*, the computer doubles your VE score and then adds your Arithmetic Reasoning (AR) score and your Mathematics Knowledge (MK) score to it.

The basic equation looks like this: $\text{Raw AFQT Score} = 2\text{VE} + \text{AR} + \text{MK}$

4. Convert your raw score to a *percentile score*, which basically compares your results to the results of thousands of other ASVAB test takers.

For example, a score of 50 means that you scored better than 50 percent of the individuals the military is comparing you to.

The military's AFQT score requirements for enlistment

AFQT scores are grouped into five main categories based on the percentile score ranges shown in the following table. Categories III and IV are divided into sub groups because the services sometimes use this chart for internal tracking purposes, enlistment limits, and enlistment incentives. Based on your scores, the military decides how trainable you may be to perform jobs in the service.

Category	Percentile Score	Trainability
I	93–100	Outstanding
II	65–92	Excellent
III A	50–64	Above average
III B	31–49	Average
IV A	21–30	Below average
IV B	16–20	Markedly below average
IV C	10–15	Poor
V	0–9	Not trainable

Meeting supply and demand

The United States Congress sets the authorized size (called *strength ceilings*) for each of the service branches. The army is the largest branch by far. In order to maintain its strength ceiling, the active duty army has to recruit 80,000 new troops each year. Compare this number with the 36,000 for active duty navy, 30,000 for active duty air force, 32,000 for the Marine Corps, and 4,000 for the Coast Guard. Because of these higher recruiting requirements and because the army bears the brunt of deployments to such places as Iraq, Afghanistan, Bosnia, and Kosovo, the army has been forced to lower many of its recruiting standards. On the other hand, the army also offers higher enlistment bonuses and other incentives than do the other branches.

Congress sets the permissible ranges, but the individual services can act within those ranges based on its current recruiting needs. For example, Congress has set the maximum allowable enlistment bonus to \$40,000. But, only the army offers the maximum, and then only for a few “hard-to-fill” jobs. The air force (and the other services) can also offer \$40,000, if it felt it needed to, but it

doesn’t (the maximum bonus currently authorized by the air force is \$16,000 for a six-year enlistment as a Linguist. The army, on the other hand, gives a \$40,000 bonus to an applicant who’s “trainable” for the linguist position for a 4-year enlistment).

The same is true on ASVAB Categories. Congress has said that the maximum number of CAT IVs that any service can accept per year is 4 percent. However, at this time, the army is the only service branch that feels that it has to allow a few of this category in to make its recruiting goals (right now, about one percent of army enlistments come from CAT 4A). The other services feel they can make their goals without allowing CAT IVs in.

To further complicate matters, in 2006, Congress increased the size of the active duty army by 30,000. In 2008, Congress plans to increase it by another 30,000 troops. In contrast, last year Congress decreased the size of the active duty air force and navy, so these two services are undergoing a downsizing for the next few years, which means they’re accepting even fewer new recruits than usual.



The U.S. Congress has directed that the military can’t accept Category V recruits or more than four percent of recruits from Category IV. If you’re in Category IV, you must have a high-school diploma to be eligible for enlistment. Even so, if you’re Category IV, your chances of enlistment are small and mostly limited to the army. See the nearby sidebar for details.

Depending on whether you have a high-school diploma or a GED, the military has different AFQT score requirements. Check out Table 1-2 for these requirements.

Table 1-2 AFQT Score Requirements

<i>Branch of Service</i>	<i>Minimum AFQT Score with High-School Diploma</i>	<i>Minimum AFQT Score with GED</i>	<i>Special Circumstances</i>
U.S. Air Force	36	65	In very rare cases, if the applicant possesses special skills (such as speaking a foreign language that the air force considers critical), the score of 36 can be waived to 31. The air force allows less than 1 percent of its enlistees each year who have a GED instead of a high school diploma.
Army	31	31	At the time of this writing, the army has been approving more and more waivers for those folks with scores as low as 26 (Category IVA). This is one of the standards the army has changed in order to meet its recruiting requirements.

(continued)

Table 1-2 (continued)

Branch of Service	Minimum AFQT Score with High-School Diploma	Minimum AFQT Score with GED	Special Circumstances
Coast Guard	40	50	A waiver is possible if a recruit's ASVAB line scores qualify him/her for a specific job, and the recruit is willing to enlist in that job. Very few (about 5 percent) each year are allowed to enlist with a GED.
Marine Corps	32	50	Between 5 and 10 percent of recruits can enlist with a GED.
Navy	31	50	5 to 10 percent of recruits can enlist with a GED. Those with a GED must also be at least 19 and show a proven work history.

The military's AFQT requirements for special programs

Achieving the minimum required AFQT score established by the individual branch gets your foot in the door, but the higher you score the better. For example, if you need a medical or criminal history waiver in order to enlist, the military personnel who make those decisions are more likely to take a chance on you if they think you're a pretty smart cookie, than if you barely made the minimum qualifying score.

Individual branches of the military tie many special enlistment programs to minimum AFQT scores:

- ✓ The **army** requires a minimum AFQT score of 50 to qualify for most of its incentive programs, such as a monetary enlistment bonus, college-loan repayment program, or the Army College Fund.
- ✓ If you hope to be one of the very few people each year allowed to enlist in the **air force** with a GED, you'll need a minimum AFQT score of 65.
- ✓ Like the army, the **Marine Corps** requires a minimum AFQT score of 50 for most of its incentive programs, including the Geographic Area of Choice Program, the Marine Corps College Fund, and enlistment bonuses.
- ✓ The **navy** requires those folks with GEDs to have a minimum AFQT score of 50 to enlist. Additionally, applicants who wish to participate in the Navy College Fund or college loan repayment program need to achieve a minimum score of 50.

Note: The navy has also been known to raise its minimum AFQT requirements to 50 for females (just to qualify for enlistment) when it receives too many female applicants. (Because of the limited number of females that it can house on ships, the navy restricts the number of females that can enlist each year.)



Enlistment programs are subject to change without notice based on the current recruiting needs of the service. Your recruiter should be able to give you the most up-to-date information, or visit <http://usmilitary.about.com>.

Failing to Qualify and Retaking the ASVAB

You can't actually "fail" the ASVAB, but you can fail to achieve a high enough score to enlist in the service branch you want. If this happens that means your AFQT score was too low, which in turn means you need to work on one (or more) of the four core areas: Math

Knowledge, Arithmetic Reasoning, Reading Comprehension, and Word Knowledge. Parts II and III of this book are specifically designed to help you improve your scores on these four subtests.

After you're sure that you're ready, you can apply (through your recruiter) for a retest. After you take an initial ASVAB test (taking the ASVAB in high school doesn't count as an initial test), you can retake the test after 30 days. After the retest, you must wait at least six months before taking the ASVAB again.



You can't retake the ASVAB on a whim or whenever you simply feel like it. Each of the services has its own rules concerning whether it's allowed a retest. Check out the following sections for more information.



ASVAB tests are valid for two years, as long as you aren't in the military. In most cases, after you join the military, your ASVAB scores remain valid as long as you are in. In other words, except in a few cases, you can use your enlistment ASVAB scores to qualify for retraining years later.

U.S. Army retest policy

The army allows a retest in one of the following instances:

- ✓ If the applicant's previous ASVAB test has expired
- ✓ The applicant failed to achieve an AFQT score high enough to qualify for enlistment
- ✓ When unusual circumstances occur, such as if an applicant, through no fault of his own, is unable to complete the test

For example, an applicant is called away from test because of an emergency. This doesn't include the requirement for an applicant to leave a test session because of an illness that existed *before* the beginning of the session because applicants are routinely cautioned not to take the test if ill.

Recruiters aren't authorized to have applicants retested for the sole purpose of increasing aptitude area scores to meet standards prescribed for enlistment options or programs.

U.S. Air Force retest policy

The intent of retesting an applicant is for the applicant to improve the last ASVAB test so the enlistment options increase. Before any retest is administered, the recruiting flight chief must interview the applicant in person or by telephone and then give approval for the retest.



Here are a few other policies to remember:

- ✓ The air force doesn't allow retesting for applicants after they've enlisted in the Delayed Entry Program (DEP).
- ✓ Current policy allows retesting of applicants who aren't holding a job/aptitude area reservation and/or aren't in DEP but already have qualifying test scores.
- ✓ Retesting is authorized when the applicant's current line scores (mechanical, administrative, general, and electronic) limit the ability to match an air force skill with his or her qualifications.

U.S. Navy retest policy

The navy allows retesting of applicants whose previous ASVAB tests have expired or if the applicant fails to achieve a qualifying AFQT score for enlistment in the navy. In most cases, individuals in the DEP can't retest.

One notable exception is the navy's DEP Enrichment Program. This program provides for the provisional DEP enlistment of high-school diploma graduates with AFQT scores between 28 and 30. Individuals enlisted under the program are enrolled in academic enhancement training, retested with the ASVAB, and accessed to active duty provided they score 31 or higher on the subsequent ASVAB retest.

U.S. Marine Corps retest policy

The Marine Corps authorizes a retest if the applicant's previous test is expired. Otherwise, recruiters can request a retest as long as the retesting is required due to the initial scores (considering the applicant's education, training, and experience) don't appear to reflect his or her true capability. Additionally, the retest can't be requested *solely* because the applicant's initial test scores didn't meet the standards prescribed for enlistment options or programs.

U.S. Coast Guard retest policy

For the Coast Guard enlistments, six months must elapse since an applicant's last test before he or she may retest solely for the purpose of raising scores to qualify for a particular enlistment option. The Coast Guard Recruiting Center may authorize retesting after 30 days have passed from an initial ASVAB test if substantial reason exists to believe the initial test scores or subtest scores don't reflect an applicant's education, training, or experience.