

## ASVAB IQ Estimator

(Recommended from people who have practice effects on standard batteries of Cognitive functioning)

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## INSTRUCTIONS:

1. **ADMINISTRATION:** Take the test (Military.com is the source but does require personal information before you can take the practice test). The subtests, 2 through 5, are the ones that will be used in the AFQT (IQ) score. Start your timer at the beginning of the second section. Time yourself for Arithmetic Reasoning (36 minutes, 30 questions), Word Knowledge (11 minutes, 35 questions), Paragraph Comprehension (13 minutes, 15 questions), and Mathematics Knowledge (24 Minutes, 25 questions). I would just click through the first test (general science) unless you are interested in it (Norms are not provided for GS). Review your score at the end of subtest 5 (should be an option to do so on the last question of each subtest) and record your raw scores.
2. **TAKE THE TEST:** Link To Official military ASVAB practice test (Must input personal information and agree to be contacted by a recruiter): [Contact a Recruiter \(military.com\)](#) If you don't want to give your information, take the test below. Be aware, it is made by a third party and is markedly easier than the test that is offered by the military.
3. **TAKE THE ALTERNATE TEST:** Here is the test: [Free ASVAB Practice Test | 4Tests.com](#) I do not think there are the same number of questions as the actual ASVAB practice test. To combat this, find the proportion of your raw scores, then multiply that by the actual number of the items on the test. Here is an example: Say I get a 10/20 on the mathematical knowledge section of that test. On the actual ASVAB, there are 25 questions. Just multiply that proportion (.5) by the actual number of correct items on the ASVAB. Round that number and input it into my raw score to T-score table. Also, you only need to check the boxes for the mathematical knowledge, arithmetic reasoning, paragraph comprehension, and word knowledge sections since these are the only scores that go towards your AFQT score.
4. **SCORING FOR THE AFQT:** Traverse to the norms where you will see T-Scores. Convert your raw score into a T-score for each of the four subtests. Add up all four of your T-scores and use the Table on Page 4 to convert your raw score to a AFQT (percentile) score. **The correlation of the official ASVAB score to the WAIS is .8! For reference, the correlation of Ravens Progressive matrices is only about 67.**
5. **COMPUTING THE GT SCORE:** Compute your Verbal Expression (VE) score. There is a formula on the verbal section of the norms (use the T-scores). It should be noted that this method is just the average of your two verbal scores, so it might be a little deflated (I do not have the official scoring algorithms). Then, add your arithmetic reasoning T-Score to your VE score. That is essentially an IQ score with a mean of 100.7 and SD of 15.1.

Important Information:

1. **Actual Norms for the military's ASVAB practice test are not available.** However, I took the average raw scores and standard deviations for their 10 tests that are in service (forms 23A to 27B), averaged the 10 scores and SD's, and used those averages to make the *estimated* norm tables for the practice test. I believe these estimates will give you a "ballpark" estimate of your IQ. Maybe one of our cognitive testing brethren would like to collect actual norms??? I am an undergrad and self-taught, so I do not yet have the knowledge to perform such calculations.
2. There is a Tables Section to this document that is filled with data from various sources that was used to make this data. Check it out if you would like to verify (or find an error in) my calculations and reasoning.
3. Some of the tables are bonuses at the end for fun research. Tables such as the ASVAB's correlation with g and other psychometric batteries are included at the very end of this document.

## Estimates of Norms for the Word Knowledge and Paragraph Comprehension Subtests

WK Raw Score	WK T-Score	WK IQ: Mean 100, SD 15
1	15	48
2	17	50
3	18	52
4	20	55
5	21	57
6	23	60
7	25	62
8	26	64
9	28	67
10	29	69
11	31	71
12	33	74
13	34	76
14	36	79
15	37	81
16	39	83
17	40	86
18	42	88
19	44	90
20	45	93
21	47	95
22	48	98
23	50	100
24	52	102
25	53	105
26	55	107
27	56	109
28	58	112
29	59	114
30	61	117
31	63	119
32	64	121
33	66	124
34	67	126
35	69	128

PC Raw Score	PC T-Score	PC IQ: Mean 100, SD 15
1	17	51
2	21	56
3	24	61
4	28	66
5	31	71
6	34	76
7	38	82
8	41	87
9	45	92
10	48	97
11	51	102
12	55	107
13	58	112
14	62	117
15	65	122

APPROXIMATION:  $VE = (PC * WK) / 2$

## Estimated Norms for Mathematics Knowledge and Arithmetic Reasoning

AR Raw Score	AR T-Score	AR IQ: Mean 100, SD 15
1	26	64
2	28	67
3	29	69
4	31	72
5	33	74
6	34	77
7	36	79
8	38	81
9	39	84
10	41	86
11	43	89
12	44	91
13	46	94
14	48	96
15	49	99
16	51	101
17	53	104
18	54	106
19	56	109
20	57	111
21	59	114
22	61	116
23	62	119
24	64	121
25	66	124
26	67	126
27	69	129
28	71	131
29	72	134
30	74	136

MK Raw Score	MK T-Score	MK IQ: Mean 100, SD 15
1	26	64
2	28	67
3	30	70
4	32	72
5	34	75
6	35	78
7	37	81
8	39	84
9	41	87
10	43	90
11	45	92
12	47	95
13	49	98
14	51	101
15	53	104
16	54	107
17	56	110
18	58	112
19	60	115
20	62	118
21	64	121
22	66	124
23	68	127
24	70	130
25	72	132

## AFQT Percentile from the Sum of Your Four T-Scores

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TABLE 2.5. '97 AFQT Percentile Conversion

AFQT <sub>S</sub>	%	Cum. %	AFQT <sub>%</sub>	AFQT <sub>S</sub>	%	Cum. %	AFQT <sub>%</sub>
≤109	0.02	1.39	1	150	0.31	9.21	9
110	0.15	1.54	2	151	0.19	9.41	9
111	0.12	1.66	2	152	0.51	9.91	10
112	0.10	1.76	2	153	0.42	10.33	10
113	0.05	1.81	2	154	0.42	10.75	11
114	0.05	1.85	2	155	0.37	11.12	11
115	0.15	2.00	2	156	0.37	11.49	11
116	0.03	2.04	2	157	0.67	12.16	12
117	0.10	2.14	2	158	0.49	12.65	13
118	0.20	2.34	2	159	0.65	13.30	13
119	0.38	2.72	3	160	0.67	13.97	14
120	0.19	2.92	3	161	0.64	14.61	15
121	0.13	3.05	3	162	0.50	15.11	15
122	0.10	3.15	3	163	0.63	15.74	16
123	0.07	3.22	3	164	0.50	16.24	16
124	0.15	3.36	3	165	0.36	16.60	17
125	0.18	3.54	4	166	0.61	17.20	17
126	0.15	3.69	4	167	0.74	17.94	18
127	0.04	3.73	4	168	0.63	18.57	19
128	0.10	3.83	4	169	0.79	19.37	19
129	0.12	3.95	4	170	0.81	20.17	20
130	0.12	4.07	4	171	0.49	20.66	21
131	0.15	4.23	4	172	0.90	21.56	22
132	0.05	4.27	4	173	0.42	21.98	22
133	0.20	4.47	4	174	0.84	22.82	23
134	0.12	4.59	5	175	0.89	23.71	24
135	0.33	4.93	5	176	1.00	24.71	25
136	0.19	5.12	5	177	0.66	25.37	25
137	0.21	5.33	5	178	0.85	26.22	26
138	0.37	5.70	6	179	0.85	27.07	27
139	0.20	5.90	6	180	1.11	28.18	28
140	0.24	6.14	6	181	1.13	29.31	29
141	0.18	6.32	6	182	0.85	30.15	30
142	0.38	6.70	7	183	0.80	30.95	31
143	0.25	6.95	7	184	0.81	31.76	32
144	0.28	7.22	7	185	0.93	32.69	33
145	0.20	7.43	7	186	0.98	33.67	34
146	0.30	7.72	8	187	0.90	34.58	35
147	0.41	8.13	8	188	0.85	35.42	35
148	0.44	8.57	9	189	1.05	36.47	36
149	0.33	8.90	9	190	1.17	37.64	38

TABLE 2.5. '97 AFQT Percentile Conversion (continued)

AFQT <sub>S</sub>	%	Cum. %	AFQT <sub>%</sub>	AFQT <sub>S</sub>	%	Cum. %	AFQT <sub>%</sub>
191	1.36	39.00	39	231	0.93	79.81	80
192	1.12	40.12	40	232	0.94	80.75	81
193	1.04	41.15	41	233	0.77	81.52	82
194	0.95	42.10	42	234	0.81	82.34	82
195	1.19	43.29	43	235	0.74	83.07	83
196	1.05	44.33	44	236	0.76	83.83	84
197	0.79	45.13	45	237	0.75	84.57	85
198	1.07	46.19	46	238	0.54	85.12	85
199	0.95	47.14	47	239	0.93	86.04	86
200	0.65	47.80	48	240	0.71	86.76	87
201	1.14	48.93	49	241	0.92	87.67	88
202	0.84	49.77	50	242	0.55	88.23	88
203	1.32	51.09	51	243	0.74	88.97	89
204	0.84	51.93	52	244	0.82	89.79	90
205	0.96	52.89	53	245	0.59	90.38	90
206	1.14	54.04	54	246	0.59	90.97	91
207	1.18	55.22	55	247	0.58	91.55	92
208	1.07	56.29	56	248	0.59	92.14	92
209	1.15	57.44	57	249	0.52	92.66	93
210	1.10	58.54	59	250	0.37	93.04	93
211	0.96	59.50	60	251	0.32	93.35	93
212	1.44	60.94	61	252	0.46	93.82	94
213	1.28	62.22	62	253	0.50	94.32	94
214	1.14	63.36	63	254	0.39	94.70	95
215	1.12	64.48	64	255	0.19	94.90	95
216	1.02	65.50	66	256	0.32	95.21	95
217	1.23	66.73	67	257	0.37	95.58	96
218	0.80	67.53	68	258	0.37	95.95	96
219	1.04	68.57	69	259	0.45	96.39	96
220	1.01	69.58	70	260	0.34	96.73	97
221	0.79	70.37	70	261	0.16	96.89	97
222	1.03	71.40	71	262	0.34	97.24	97
223	0.95	72.35	72	263	0.23	97.47	97
224	0.97	73.32	73	264	0.20	97.67	98
225	1.16	74.49	74	265	0.29	97.96	98
226	0.77	75.26	75	266	0.11	98.06	98
227	1.13	76.39	76	267	0.25	98.31	98
228	0.89	77.28	77	268	0.14	98.45	98
229	0.91	78.19	78	≥269	0.07	98.52	99
230	0.69	78.88	79				

## Table Used to Ascertain Norm Estimates

Below are the 2004 Norms that are for each form. I averaged the means and SD's and used that to make the norm estimates for this study.

**Table 6.1. Forms 23–27 Subtest NR Score Means and Standard Deviations<sup>a,b</sup>**

	GS	AR	WK	PC	MK	EI	AS	MC	AO <sup>c</sup>
23A N = 10,752	14.57 (4.40)	14.23 (6.08)	23.30 (6.76)	9.99 (3.13)	13.27 (5.40)	10.87 (3.49)	12.78 (5.33)	13.92 (4.04)	18.07 (5.24)
23B N = 10,728	14.57 (4.47)	14.27 (6.10)	23.37 (6.82)	9.87 (3.14)	13.29 (5.48)	10.90 (3.53)	12.75 (5.35)	13.80 (4.06)	18.21 (5.28)
24A N = 11,932	14.27 (4.77)	15.09 (5.88)	21.33 (6.38)	10.62 (2.73)	13.61 (4.97)	9.41 (3.39)	11.44 (5.03)	13.04 (4.29)	18.44 (5.69)
24B N = 11,900	14.30 (4.76)	15.06 (5.90)	21.51 (6.41)	10.64 (2.71)	13.42 (5.04)	9.53 (3.40)	11.56 (5.11)	13.16 (4.26)	18.45 (5.65)
25A N = 11,835	13.66 (4.10)	15.32 (6.34)	22.42 (5.82)	10.29 (2.81)	13.58 (5.19)	10.89 (3.47)	11.22 (5.28)	13.86 (4.61)	18.76 (5.25)
25B N = 10,737	13.90 (4.10)	15.02 (6.12)	22.79 (5.84)	10.90 (3.15)	13.77 (5.32)	10.96 (3.48)	11.52 (5.37)	13.93 (4.73)	19.01 (5.14)
26A N = 10,717	12.99 (4.36)	16.89 (5.75)	22.92 (6.46)	10.36 (3.17)	13.79 (5.44)	11.14 (3.48)	11.06 (5.65)	13.39 (4.11)	18.22 (5.56)
26B N = 10,754	13.16 (4.37)	15.42 (6.24)	22.70 (5.95)	9.88 (3.07)	13.89 (5.54)	11.14 (3.43)	11.22 (5.69)	13.42 (4.11)	18.11 (5.56)
27A N = 11,884	15.03 (4.42)	16.76 (5.96)	24.90 (6.70)	12.18 (2.64)	13.83 (5.00)	10.47 (3.24)	12.65 (4.90)	14.01 (4.65)	18.25 (5.46)
27B N = 11,797	15.03 (4.36)	16.68 (6.15)	25.11 (5.96)	11.35 (2.82)	13.99 (5.14)	10.35 (3.33)	12.42 (4.87)	13.91 (4.65)	18.09 (5.47)

Data source is the IOT&E.

Standard deviations are in parentheses.

Although AO is contained in the test booklets for Forms 23–24, it is not administered during CEP/STP testing.

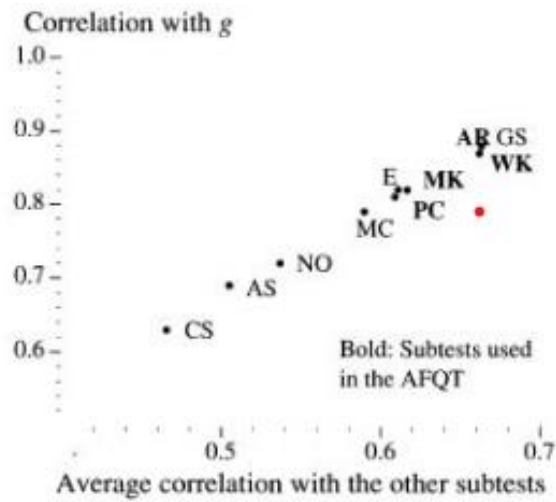
## Cool Table to Derive other Composite Scores

66 5. Occupational Qualification Impact

TABLE 5.2. Composite Moments ('80 and '97 Scales)

Composite	1980		1997	
	<i>m</i>	<i>s</i>	<i>m</i>	<i>s</i>
Army				
GT	102.8	15.4	101.8	16.4
CL	103.0	15.2	102.2	16.1
CO	101.8	15.5	103.0	16.9
EL	101.8	15.3	102.9	17.0
FA	101.9	15.6	103.0	16.8
GM	101.2	15.6	103.0	17.3
MM	100.1	16.0	103.4	18.1
OF	101.3	15.7	103.1	17.3
SC	102.3	15.2	102.8	16.7
ST	102.4	15.3	102.7	16.6
Navy				
GT	101.7	14.2	100.7	15.1
EL	203.0	28.0	203.8	29.0
BEE	207.1	29.3	204.0	28.9
ENG	100.7	12.7	101.7	13.7
MEC	148.2	22.4	152.9	22.9
MEC2	151.7	23.4	155.3	22.5
NUC	204.9	27.7	204.2	28.0
OPS	205.8	27.2	204.9	27.5
HM	154.5	20.5	151.6	21.6
ADM	104.3	13.3	101.5	14.1
Marine Corps				
MM	101.9	14.9	106.2	16.1
GT	104.4	14.8	104.8	14.9
EL	104.1	14.3	104.7	15.0
CL	106.1	13.3	103.0	14.0
Air Force				
M	53.4	23.2	56.6	25.5
A	62.7	20.4	58.8	21.9
G	57.4	22.4	57.1	24.0
E	58.5	21.5	59.4	24.4

## ASVAB Correlation with g and Other Cognitive Assessment Batteries



Correlations of the Major IQ Tests with Other Standardized Mental Tests	
	Median Correlation with Other Mental Tests
<i>Source: Jensen 1980, Table 8.5, and authors' analysis of the NLSY.</i>	
AFQT (age-referenced, 1989 scoring)	.81
Wechsler-Bellevue I	.73
Wechsler Adult Intelligence Scale (WAIS)	.77
Wechsler Intelligence Scale for Children	.64
Stanford-Binet	.71



## References

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