

# Death From Above Cheat Sheet Collection














































































































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# 1 Mechanics

## 1.1 Summary of Typical Letter and Digit Encodings

	#	ASCII <sup>1</sup>		Ascii <sup>1</sup>		Keypad	NATO <sup>2</sup>	Amino <sup>3</sup>	Morse	Braille <sup>4</sup>	Maritime <sup>5</sup>	Semaphore <sup>4</sup>	ASL <sup>6</sup>
A	1	65	41	97	61	2	Alpha	Ala	• –	⠁			
B	2	66	42	98	62	22	Bravo	Asx	– • • •	⠃			
C	3	67	43	99	63	222	Charlie	Cys	– • – •	⠉			
D	4	68	44	100	64	3	Delta	Asp	– • •	⠙			
E	5	69	45	101	65	33	Echo	Glu	•	⠑			
F	6	70	46	102	66	333	Foxtrot	Phe	• • – •	⠋			
G	7	71	47	103	67	4	Golf	Gln	– – •	⠗			
H	8	72	48	104	68	44	Hotel	His	• • • •	⠄			
I	9	73	49	105	69	444	India	Ile	• •	⠏			
J	10	74	4A	106	6A	5	Juliet	Xle	• – – –	⠞			
K	11	75	4B	107	6B	55	Kilo	Lys	– • –	⠅			
L	12	76	4C	108	6C	555	Lima	Leu	• – • •	⠙			
M	13	77	4D	109	6D	6	Mike	Met	– –	⠍			
N	14	78	4E	110	6E	66	November	Asn	– •	⠝			
O	15	79	4F	111	6F	666	Oscar		– – –	⠥			
P	16	80	50	112	70	7	Papa	Pro	• – – •	⠏			
Q	17	81	51	113	71	77	Quebec	Gln	– – • –	⠒			
R	18	82	52	114	72	777	Romeo	Arg	• – •	⠗			
S	19	83	53	115	73	7777	Sierra	Ser	• • •	⠎			
T	20	84	54	116	74	8	Tango	Thr	–	⠞			
U	21	85	55	117	75	88	Uniform		• • –	⠤			
V	22	86	56	118	76	888	Victor	Val	• • • –	⠦			
W	23	87	57	119	77	9	Whiskey	Trp	• – –	⠦			
X	24	88	58	120	78	99	X-ray	Xaa	– • • –	⠭			
Y	25	89	59	121	79	999	Yankee	Thr	– • – –	⠽			
Z	26	90	5A	122	7A	9999	Zulu	Glx	– – • •	⠵			
#										⠼			
0	0	48	30	48	30				– – – –	⠠			
1	1	49	31	49	31				• – – –	⠡			
2	2	50	32	50	32				• • – –	⠢			
3	3	51	33	51	33				• • • –	⠣			
4	4	52	34	52	34				• • • –	⠣			
5	5	53	35	53	35				• • • •	⠤			
6	6	54	36	54	36				– • • •	⠥			
7	7	55	37	55	37				– – • •	⠦			
8	8	56	38	56	38				– – – •	⠧			
9	9	57	39	57	39				– – – •	⠧			

<sup>1</sup> A complete ASCII chart can be found in 2.1.1

<sup>2</sup> Alternate phonetic alphabets are provided in 2.7.1

<sup>3</sup> A complete amino acid chart can be found in 2.3.1

<sup>4</sup> The # symbol precedes numbers, whose symbols are shared with A-J

<sup>5</sup> Square numeric flags deprecated by pennant flags

<sup>6</sup> Only finger spelling is provided in this document; a complete dictionary is available at [www.dailyasl.com/ASLdictionary.htm](http://www.dailyasl.com/ASLdictionary.htm)

## 1.2 Sorts

In approximate order of likelihood

- Given Order
- Alphabetical
- Chronological
- Numeric Association

## 1.3 Letter Extractions From Words or Text

In approximate order of likelihood

- First Letter
- Unique Letter Histogram (Common, Repeated, Absent, or Odd Man Out Letter)
- Given Index
- Fixed Width
- Special Letter (ie. Names with Middle Initials)
- Alphanumeric (ie. ASCII or Direct Substitution)
- Misspellings
- Lipograms (Text Deliberately Omitting a Letter)
- Last Letter
- Diagonal Readout

## 1.4 Wordplay

- Transdeletion and Transinsertion (Removing or Adding a Letter and Anagramming)
- Substring Replacement
- Word Boundary Blurring
- Pangrams (Text Containing Every Letter) and Lipograms (Text Deliberately Omitting One or More Letters)
- Synonyms and Antonyms
- Homophones

## 1.5 Other Mappings

- Braille
- Morse Code
- Semaphore
- Flags
- Operator or T9 codes (Phone Typing)
- Cryptograms and Vigenère Ciphers
- Airport Codes
- Random Anagrams

## 1.6 Interesting Numbers

- Tracking Numbers
  - USPS (9 Digits: EA ### ## US)
  - FEDEX (12 Digits: #####)
  - UPS (16 Digits: 1Z #####)
  - DHL (7 Digit: #####, or 3 Char and 6 Digits: AAA#####, or 3 Char and 7 Digits: AAA#####)
- UPC Codes (10 Digits: ##### or 12 Digits # ##### #)
- ISBN Code (13 Digits: ###-#-#####-#-# or 10 Digits: #-####-####-#)
- IMDB Index Number (7 Digits: tt#####)
- Zip Code (5 Digits: ##### or 9 Digits: #####-####)
- Telephone Numbers (7 Digits: ###-#### or 10 Digits: (###) ###-####)
- IP Addresses (4 Numbers Under 255: ###.###.###.###)
- Coordinates
- ASCII (See Section 2.1.1)
- Country Codes (See Section 2.7.2)
- Biblical Passages (Name and Two Numbers)

## 1.7 Other Mechanics

- Cut and Paste (Get Out Your Scissors)
- Chaining (A was in 1 with B who was in 2 with C....)
- Image Edits (Does the Image Match the Original? Does the Thumbnail Match the Image?)
- Information Hidden in the Source Code?
- Uniqueness (You noticed they're all in source X; Do they all appear only once?)
- Navigation on a Map
- Overlaying Images and Maps
- Folding

## 1.8 Easily Overlooked Information

- Title and Flavortext
- Source Code and Color Codes
- Filenames

## 1.9 ACME's Have You Tried?

- For Starters
  - Reading the title and the flavor text
  - Typing it into a search engine
  - Pursuing even a train of thought that doesn't seem to give a cogent answer at first
  - Looking at the list of helpful websites
  - Looking at the binder of useful stuff
- Letters and Words
  - Alphabetizing
  - Using the leftover letters to spell something
  - Rearranging the letters (aka "anagramming" or "transposing")
  - Looking for unusual letter frequencies
  - Determining if it is a Rot 13 or Caesar shift in general
  - Shifting from letters to numbers
  - Treating letters as protein sequences
  - Treating letters as call letters
  - Turning it into a cryptic crossword clue
  - Seeing if these words relate to song lyrics
  - Seeing if there are any acronyms or phrases
  - Diagonalizing (taking the first letter of the first answer, the second letter of the second...)
  - Looking at a computer keyboard
  - A pun
- Numbers
  - Graphing it functionally
  - Graphing it parametrically
  - Checking to see if your numbers are in the right base (including hex)
  - Shifting from numbers to letters
  - Using it as a phone number
  - Using it as an IP address
  - Matching numbers to MIT buildings
  - Matching numbers to MIT courses
  - Treating numbers as dates
  - Treating numbers as atomic weights, numbers, etc.
  - Treating numbers as latitude/longitude or GPS coordinates
  - Treating numbers as radio stations
  - Treating numbers as ASCII numbers
  - Treating numbers as PLU numbers
  - Treating numbers as ISBN numbers
  - Seeing if there are any strange sequences
  - Seeing if prime numbers are involved
  - Seeing if fundamental constants are involved
  - Asking what other numbers are close to the one you have
- Thirteen Ways of Looking at a Puzzle
  - Looking at it in a mirror
  - Squinting at it from far away
  - Tilting it
  - Looking at it upside down
  - Looking through it
  - Rewriting it neatly
  - Rewriting it on graph paper
  - Saying it out loud to someone else
  - Putting yourself in the constructor's shoes
  - Making it 3D
  - Cutting it up
  - Folding it
  - Connecting the dots
- What Is It?
  - Looking at a song/poem/book/movie/TV show
  - Braille
  - Morse code
  - Overlaying it on a map of MIT
  - Getting on the T
  - Checking it for pop culture references with Tanis, Jenn, Denis or James
  - Using the Library of Congress or Dewey decimal system
  - Asking whether it has anything to do personally with the constructing team
  - Palm graffiti
  - Running it by someone who goes to MIT
- Zen
  - Trusting your instincts
  - Trusting someone else's instincts
  - Asking "what's weird about this?"
  - Taking a step back
  - Asking for fresh brains
  - Checking your work
  - Asking someone else to check your work
  - Explaining your work to someone else
  - Doing what you've already done again to the output
  - Consulting the list of expertise
  - Leaving the room
  - Asking people if it looks like anything they recognize
  - Thinking about what's missing
  - Asking yourself whether you've used all the information
  - Keeping even a strange-looking result
  - Brute force
  - Not thinking about it
  - Splitting up tasks to solve in a group
  - Talking to a hunt veteran
  - Talking to a hunt newbie
  - Asking "what's the pattern?"
  - Rereading the instructions

## 2 Specialized Knowledge

### 2.1 Technology

#### 2.1.1 ASCII

Dec	Bin	Oct	Hex	Glyph
0	00000000	0000	00	NUL
1	00000001	0001	01	SOH
2	00000010	0002	02	STX
3	00000011	0003	03	ETX
4	00000100	0004	04	EOT
5	00000101	0005	05	ENQ
6	00000110	0006	06	ACK
7	00000111	0007	07	BEL
8	00001000	0010	08	BS
9	00001001	0011	09	HT
10	00001010	0012	0A	LF
11	00001011	0013	0B	VT
12	00001100	0014	0C	FF
13	00001101	0015	0D	CR
14	00001110	0016	0E	SO
15	00001111	0017	0F	SI
16	00010000	0020	10	DLE
17	00010001	0021	11	DC1
18	00010010	0022	12	DC2
19	00010011	0023	13	DC3
20	00010100	0024	14	DC4
21	00010101	0025	15	NAK
22	00010110	0026	16	SYN
23	00010111	0027	17	ETB
24	00011000	0030	18	CAN
25	00011001	0031	19	EM
26	00011010	0032	1A	SUB
27	00011011	0033	1B	ESC
28	00011100	0034	1C	FS
29	00011101	0035	1D	GS
30	00011110	0036	1E	RS
31	00011111	0037	1F	US
32	00100000	0040	20	
33	00100001	0041	21	!
34	00100010	0042	22	"
35	00100011	0043	23	#
36	00100100	0044	24	\$
37	00100101	0045	25	%
38	00100110	0046	26	&
39	00100111	0047	27	'
40	00101000	0050	28	(
41	00101001	0051	29	)
42	00101010	0052	2A	*
43	00101011	0053	2B	+
44	00101100	0054	2C	,
45	00101101	0055	2D	-
46	00101110	0056	2E	.
47	00101111	0057	2F	/
48	00110000	0060	30	0
49	00110001	0061	31	1
50	00110010	0062	32	2
51	00110011	0063	33	3
52	00110100	0064	34	4
53	00110101	0065	35	5
54	00110110	0066	36	6
55	00110111	0067	37	7
56	00111000	0070	38	8
57	00111001	0071	39	9
58	00111010	0072	3A	:
59	00111011	0073	3B	;
60	00111100	0074	3C	<
61	00111101	0075	3D	=
62	00111110	0076	3E	>
63	00111111	0077	3F	?

Dec	Bin	Oct	Hex	Glyph
64	01000000	0100	40	@
65	01000001	0101	41	A
66	01000010	0102	42	B
67	01000011	0103	43	C
68	01000100	0104	44	D
69	01000101	0105	45	E
70	01000110	0106	46	F
71	01000111	0107	47	G
72	01001000	0110	48	H
73	01001001	0111	49	I
74	01001010	0112	4A	J
75	01001011	0113	4B	K
76	01001100	0114	4C	L
77	01001101	0115	4D	M
78	01001110	0116	4E	N
79	01001111	0117	4F	O
80	01010000	0120	50	P
81	01010001	0121	51	Q
82	01010010	0122	52	R
83	01010011	0123	53	S
84	01010100	0124	54	T
85	01010101	0125	55	U
86	01010110	0126	56	V
87	01010111	0127	57	W
88	01011000	0130	58	X
89	01011001	0131	59	Y
90	01011010	0132	5A	Z
91	01011011	0133	5B	[
92	01011100	0134	5C	\
93	01011101	0135	5D	]
94	01011110	0136	5E	^
95	01011111	0137	5F	_
96	01100000	0140	60	`
97	01100001	0141	61	a
98	01100010	0142	62	b
99	01100011	0143	63	c
100	01100100	0144	64	d
101	01100101	0145	65	e
102	01100110	0146	66	f
103	01100111	0147	67	g
104	01101000	0150	68	h
105	01101001	0151	69	i
106	01101010	0152	6A	j
107	01101011	0153	6B	k
108	01101100	0154	6C	l
109	01101101	0155	6D	m
110	01101110	0156	6E	n
111	01101111	0157	6F	o
112	01110000	0160	70	p
113	01110001	0161	71	q
114	01110010	0162	72	r
115	01110011	0163	73	s
116	01110100	0164	74	t
117	01110101	0165	75	u
118	01110110	0166	76	v
119	01110111	0167	77	w
120	01111000	0170	78	x
121	01111001	0171	79	y
122	01111010	0172	7A	z
123	01111011	0173	7B	{
124	01111100	0174	7C	
125	01111101	0175	7D	}
126	01111110	0176	7E	~
127	01111111	0177	7F	DEL

## 2.1.2 Common Ports<sup>1</sup>

Standard Ports	
20	FTP
21	FTP
22	SSH
23	Telnet
25	SMTP
43	Whois
53	DNS
68	DHCP
79	Finger
80	HTTP
110	POP3
115	SFTP
119	NNTP
123	NTP
137	NetBIOS
138	NetBIOS
139	NetBIOS
143	IMAP
161	SNMP
194	IRC
220	IMAP3
389	LDAP
443	SSL
445	SMB
993	SIMAP
995	SPOP

Registered Ports	
1352	Lotus Notes
1433	Microsoft SQL
1494	Citrix ICA
1521	Oracle SQL
1604	Citrix ICA, Microsoft Terminal
2049	NFS
3306	mySQL
3724	World of Warcraft
3783	GameSpy Arcade
4000	ICQ, Blizzard Battlenet <sup>2</sup>
5010	Yahoo! Instant Messenger
6500	Neverwinter Nights
5190	AOL Instant Messenger
5632	PCAnywhere
5800	VNC
5900	VNC
6000	X Windowing System
6667	GameSpy Arcade
6699	Napster
7070	RealServer, Quicktime
7777	Unreal Tournament
7778	Unreal
8080	HTTP
26000	Quake
27010	Half-Life
27900	Neverwinter Nights, GameSpy Arcade
27910	Quake II
27960	Quake III
28900	Neverwinter Nights, GameSpy Arcade
29900	GameSpy Arcade
29901	GameSpy Arcade
47624	Age of Empires

Exploited Ports	
31	Agent 31, Hackers Paradise, Masters Paradise
1170	Psyber Stream
1234	Ultors Trojan
1243	SubSeven
1981	ShockRave
2001	Trojan Cow
2023	Ripper Pro
2140	Deep Throat, Invasor
2989	Rat Backdoor
3024	WinCrash
3150	Deep Throat, Invasor
3700	Portal of Doom
4950	ICQ Trojan
6346	Gnutella
6400	The Thing
6667	Trinity, SubSeven
6670	Deep Throat
12345	NetBus, GabanBus, Pie Bill Gates, X-Bill
12346	NetBus
16660	Stacheldraht
18753	Shaft
20034	NetBus
20432	Shaft
20433	Shaft
27374	SubSeven
27444	Trinoo
27665	Trinoo
30100	Sphere
31335	Trinoo
31337	Back Orifice, Baron Night, Bo Facil
33270	Trinity
33567	Lion
33568	Lion
40421	Masters Paradise
60008	Lion
65000	Stacheldraht

<sup>1</sup> More comprehensive lists can be found at [www.iss.net/security\\_center/advice/Exploits/Ports/](http://www.iss.net/security_center/advice/Exploits/Ports/), [www.portforward.com/cports.htm](http://www.portforward.com/cports.htm), and [en.wikipedia.org/wiki/List\\_of\\_TCP\\_and\\_UDP\\_port\\_numbers](http://en.wikipedia.org/wiki/List_of_TCP_and_UDP_port_numbers)

<sup>2</sup> Includes Warcraft II and III, Starcraft, Diablo I and II



## 2.2 Engineering

### 2.2.1 Resistor Color Code

Color	Value	Mult.	Tolerance		Temp.
Black	0	$10^0$			
Brown	1	$10^1$	±1%	(F)	100ppm
Red	2	$10^2$	±2%	(G)	50ppm
Orange	3	$10^3$			15ppm
Yellow	4	$10^4$			25ppm
Green	5	$10^5$	±0.5%	(D)	
Blue	6	$10^6$	±0.25%	(C)	
Violet	7	$10^7$	±0.1%	(B)	
Grey	8	$10^8$	±0.05%	(A)	
White	9	$10^9$			
Gold		$10^{-1}$	±5%	(J)	
Silver		$10^{-2}$	±10%	(K)	
(none)			±20%	(M)	

## 2.2.2 Common 74-Series Logic<sup>1</sup>

P/N	Description	Gates	Fan-In	Pins
7400	Quad 2-Input NAND	4	2	14
7401	Quad 2-Input NAND Open Collector	4	2	14
7402	Quad 2-Input NOR	4	2	14 <sup>2</sup>
7403	Quad 2-Input NAND Open Collector	4	2	14
7404	Hex Inverter	6	1	14
7405	Hex Inverter OC	6	1	14
7408	Quad 2-Input AND	4	2	14
7409	Quad 2-Input AND Open Collector	4	2	14
7410	Triple 3-Input NAND	3	3	14
7411	Triple 3-Input AND	3	3	14
7412	Triple 3-Input NAND Open Collector	3	3	14
7413	Dual 4-Input NAND Schmitt Trigger	2	4	14
7414	Hex Inverter ST	6	1	14
7415	Triple 3-Input AND Open Collector	3	3	14
7416	Hex Inverter Open Collector	6	1	14
7417	Hex Buffer Open Collector	6	1	14
7419	Hex Inverter Schmitt Trigger	6	1	14
7420	Dual 4-Input NAND	2	4	14
7421	Dual 4-Input AND	2	4	14
7422	Dual 4-Input NAND Open Collector	2	4	14
7423	Dual 4-Input NOR with strobe	2	4	16
7424	Quad 2-Input NAND Schmitt Trigger Line Receiver	4	2	14
7425	Dual 4-Input NOR with Enable	2	4	14
7426	Quad 2-Input NAND Open Collector	4	2	14
7427	Triple 3-Input NOR	3	3	14
7428	Quad 2-Input NOR Buffered	4	2	14
7430	8-Input NAND	1	8	14
7432	Quad 2-Input OR	4	2	14
7433	Quad 2-Input NOR Open Collector	4	2	14
7434	Hex Buffer	6	1	14
7435	Hex Buffer Open Collector	6	1	14
7437	Quad 2-Input NAND Buffered	4	2	14
7438	Quad 2-Input NAND Open Collector Buffered	4	2	14
7439	Quad 2-Input Positive NAND Open Collector	4	2	14
7440	Dual 4-Input NAND Buffered	2	4	14
7442	BCD to Decimal Decoder	1		16
7447	BCD to 7-Segment Driver	1		16
7486	Quad 2-Input XOR	4	2	14
7490	Decade Ripple Counter	1		14
7493	4-Bit Ripple Counter	1		14
74132	Quad 2-Input NAND Schmitt Trigger	4	2	14
74150	16:1 Multiplexer	1	16	24
74151	8:1 Multiplexer	1	8	16
74152	8:1 Multiplexer	1	8	14
74153	Dual 4:1 Multiplexer	2	4	16
74154	4:16 Demultiplexer	1	4	24
74155	Dual 2:4 Demultiplexer	2	2	16
74156	Dual 2:4 Demultiplexer Open Collector	2	2	16
74157	Quad 2:1 Multiplexer	4	2	16
74158	Quad 2:1 Inverting Multiplexer	4	2	16
74159	4:16 Demultiplexer	4	4	24
74160	Synchronous Decade Counter Standard Reset	1		16
74161	Synchronous 4-Bit Counter Standard Reset	1		16
74162	Synchronous Decade Counter Synchronous Reset	1		16
74163	Synchronous 4-Bit Counter Synchronous Reset	1		16
74192	Up/Down Decade Counter	1		16
74193	Up/Down 4-Bit Counter	1		16
74390	Dual Decade Ripple Counter	2		16
74393	Dual 4-Bit Ripple Counter	2		16
744017	Decade Counter	1		16
744020	14-Bit Ripple Counter	1		16
744020	12-Bit Ripple Counter	1		16
744060	14-Bit Ripple Counter with Internal Oscillator	1		16
744511	BCD to 7-Segment Driver	1		16

<sup>1</sup> A comprehensive list can be found at [en.wikipedia.org/wiki/List\\_of\\_7400\\_series\\_integrated\\_circuits](https://en.wikipedia.org/wiki/List_of_7400_series_integrated_circuits)

<sup>2</sup> Atypical pinout

### 2.3.1 Periodic Table of the Elements

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
IA	IIA	IIIB	IVB	VB	VIB	VII B	VIII B					IIIA	IVA	VA	VIA	VIIA	VIIIA
1 <b>H</b> Hydrogen 1.00794	2 <b>He</b> Helium 4.002602											5 <b>B</b> Boron 10.811	6 <b>C</b> Carbon 12.0107	7 <b>N</b> Nitrogen 14.00674	8 <b>O</b> Oxygen 15.9994	9 <b>F</b> Fluorine 18.9984032	10 <b>Ne</b> Neon 20.1797
3 <b>Li</b> Lithium 6.941	4 <b>Be</b> Beryllium 9.012162											13 <b>Al</b> Aluminum 26.981538	14 <b>Si</b> Silicon 28.0855	15 <b>P</b> Phosphorus 30.973761	16 <b>S</b> Sulfur 32.065	17 <b>Cl</b> Chlorine 35.453	18 <b>Ar</b> Argon 39.948
11 <b>Na</b> Sodium 22.989770	12 <b>Mg</b> Magnesium 24.3050											31 <b>Ga</b> Gallium 69.723	32 <b>Ge</b> Germanium 72.64	33 <b>As</b> Arsenic 74.92160	34 <b>Se</b> Selenium 78.96	35 <b>Br</b> Bromine 79.904	36 <b>Kr</b> Krypton 83.798
19 <b>K</b> Potassium 39.0983	20 <b>Ca</b> Calcium 40.078											49 <b>In</b> Indium 114.818	50 <b>Sn</b> Tin 118.710	51 <b>Sb</b> Antimony 121.760	52 <b>Te</b> Tellurium 127.60	53 <b>I</b> Iodine 126.90447	54 <b>Xe</b> Xenon 131.293
37 <b>Rb</b> Rubidium 85.4678	38 <b>Sr</b> Strontium 87.62											81 <b>Tl</b> Thallium 204.3833	82 <b>Pb</b> Lead 207.2	83 <b>Bi</b> Bismuth 208.98038	84 <b>Po</b> Polonium (209)	85 <b>At</b> Astatine (210)	86 <b>Rn</b> Radon (222)
55 <b>Cs</b> Cesium 132.90545	56 <b>Ba</b> Barium 137.327											113 <b>In</b> Indium (284)	114 <b>Pb</b> Lead (289)	115 <b>Uup</b> Ununpentium (286)	116 <b>Uuh</b> Ununhexium (292)	117 <b>Uus</b> Ununseptium (293)	118 <b>Uuo</b> Ununoctium (294)
87 <b>Fr</b> Francium (223)	88 <b>Ra</b> Radium (226)											127 <b>Bh</b> Bohrium (264)	128 <b>Hs</b> Hassium (269)	129 <b>Mt</b> Meitnerium (268)	130 <b>Ds</b> Darmstadtium (271)	131 <b>Rg</b> Roentgenium (272)	132 <b>Uub</b> Ununbium (285)
												101 <b>Ag</b> Silver 107.8682	102 <b>Cd</b> Cadmium 112.411	103 <b>In</b> Indium 114.818	104 <b>Sn</b> Tin 118.710	105 <b>Sb</b> Antimony 121.760	106 <b>Te</b> Tellurium 127.60
												29 <b>Cu</b> Copper 63.546	30 <b>Zn</b> Zinc 65.409	31 <b>Ga</b> Gallium 69.723	32 <b>Ge</b> Germanium 72.64	33 <b>As</b> Arsenic 74.92160	34 <b>Se</b> Selenium 78.96
												27 <b>Co</b> Cobalt 58.933200	28 <b>Ni</b> Nickel 58.6934	29 <b>Cu</b> Copper 63.546	30 <b>Zn</b> Zinc 65.409	31 <b>Ga</b> Gallium 69.723	32 <b>Ge</b> Germanium 72.64
												25 <b>Mn</b> Manganese 54.938045	26 <b>Fe</b> Iron 55.8457	27 <b>Co</b> Cobalt 58.933200	28 <b>Ni</b> Nickel 58.6934	29 <b>Cu</b> Copper 63.546	30 <b>Zn</b> Zinc 65.409
												23 <b>V</b> Vanadium 50.9415	24 <b>Cr</b> Chromium 51.9961	25 <b>Mn</b> Manganese 54.938045	26 <b>Fe</b> Iron 55.8457	27 <b>Co</b> Cobalt 58.933200	28 <b>Ni</b> Nickel 58.6934
												21 <b>Sc</b> Scandium 44.955910	22 <b>Ti</b> Titanium 47.887	23 <b>V</b> Vanadium 50.9415	24 <b>Cr</b> Chromium 51.9961	25 <b>Mn</b> Manganese 54.938045	26 <b>Fe</b> Iron 55.8457
												39 <b>Y</b> Yttrium 88.90585	40 <b>Zr</b> Zirconium 91.224	41 <b>Nb</b> Niobium 92.90638	42 <b>Mo</b> Molybdenum 95.94	43 <b>Tc</b> Technetium (98)	44 <b>Ru</b> Ruthenium 101.07
												57 to 71	72 <b>Hf</b> Hafnium 178.49	73 <b>Ta</b> Tantalum 180.9479	74 <b>W</b> Tungsten 183.84	75 <b>Re</b> Rhenium 186.207	76 <b>Os</b> Osmium 190.23
												89 to 103	104 <b>Rf</b> Rutherfordium (261)	105 <b>Db</b> Dubnium (262)	106 <b>Sg</b> Seaborgium (266)	107 <b>Bh</b> Bohrium (264)	108 <b>Hs</b> Hassium

Note: The subgroup numbers 1-18 were adopted in 1984 by the International Union of Pure and Applied Chemistry. The names of elements 112-118 are the Latin equivalents of those numbers.

## 2.3.2 Amino Acids

		2nd Base															
		U				C				A				G			
1st Base	U	UUU	Phenylalanine	Phe	F	UCU	Serine	Ser	S	UAU	Tyrosine	Tyr	Y	UGU	Cysteine	Cys	C
		UUC	Phenylalanine	Phe	F	UCC	Serine	Ser	S	UAC	Tyrosine	Tyr	Y	UGC	Cysteine	Cys	C
		UUA	Leucine	Leu	L	UCA	Serine	Ser	S	UAA	Ochre (Stop)			UGA	Opal (Stop)		
		UUG	Leucine	Leu	L	UCG	Serine	Ser	S	UAG	Amber (Stop)			UGG	Tryptophan	Trp	W
	C	CUU	Leucine	Leu	L	CCU	Proline	Pro	P	CAU	Histidine	His	H	CGU	Arginine	Arg	R
		CUC	Leucine	Leu	L	CCC	Proline	Pro	P	CAC	Histidine	His	H	CGC	Arginine	Arg	R
		CUA	Leucine	Leu	L	CCA	Proline	Pro	P	CAA	Glutamine	Gln	Q	CGA	Arginine	Arg	R
		CUG	Leucine	Leu	L	CCG	Proline	Pro	P	CAG	Glutamine	Gln	Q	CGG	Arginine	Arg	R
	A	AUU	Isoleucine	Ile	I	ACU	Threonine	Thr	T	AAU	Asparagine	Asn	N	AGU	Serine	Ser	S
		AUC	Isoleucine	Ile	I	ACC	Threonine	Thr	T	AAC	Asparagine	Asn	N	AGC	Serine	Ser	S
		AUA	Isoleucine	Ile	I	ACA	Threonine	Thr	T	AAA	Lysine	Lys	K	AGA	Arginine	Arg	R
		AUG	Methionine (Start)	Met	M	ACG	Threonine	Thr	T	AAG	Lysine	Lys	K	AGG	Arginine	Arg	R
	G	GUU	Valine	Val	V	GCU	Alanine	Ala	A	GAU	Aspartic Acid	Asp	D	GGU	Glycine	Gly	G
		GUC	Valine	Val	V	GCC	Alanine	Ala	A	GAC	Aspartic Acid	Asp	D	GGC	Glycine	Gly	G
		GUA	Valine	Val	V	GCA	Alanine	Ala	A	GAA	Glutamic Acid	Glu	E	GGA	Glycine	Gly	G
		GUG	Valine	Val	V	GCG	Alanine	Ala	A	GAG	Glutamic Acid	Glu	E	GGG	Glycine	Gly	G

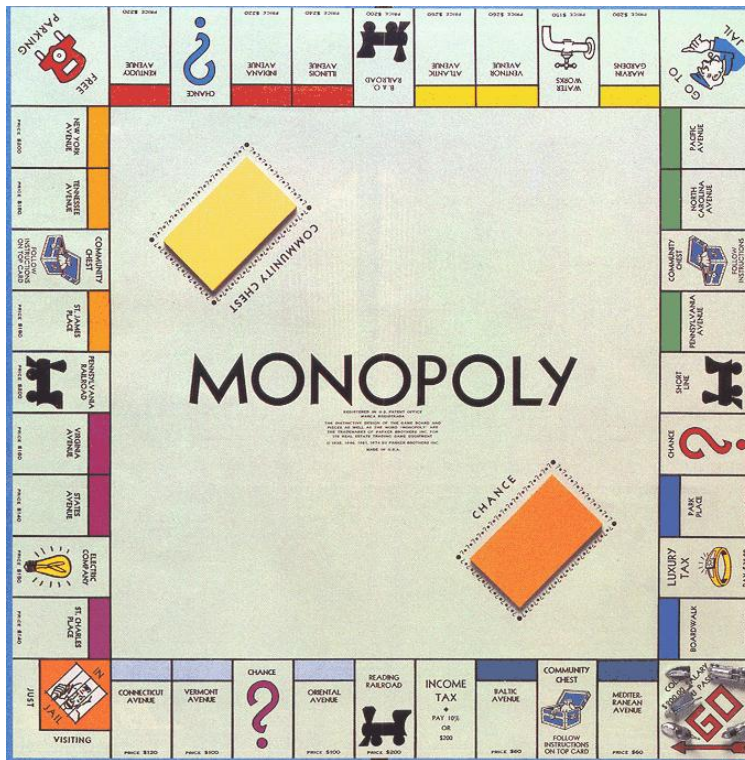
## 2.4 Games

### 2.4.1 Scrabble



	Cnt.	Pts.
A	9	1
B	2	3
C	2	3
D	4	2
E	12	1
F	2	4
G	3	2
H	2	4
I	9	1
J	1	8
K	1	5
L	4	1
M	2	3
N	6	1
O	8	1
P	2	3
Q	1	10
R	6	1
S	4	1
T	6	1
U	4	1
V	2	4
W	2	4
X	1	8
Y	2	4
Z	1	10
-	2	0

## 2.4.2 Monopoly



Bill	Count	Total
1	5	5
5	5	25
10	5	50
20	6	120
50	2	100
100	2	200
500	2	1000
		1500

Limited Commodities		
Houses		32
Hotels		12

Pieces <sup>1</sup>	
Wheelbarrow	Battleship
Horse	Car
Thimble	Cannon
Shoe	Iron
Scottie Dog	Top Hat
Money Sack	Train

Property	#	Group	Price	Mortgage	Improve	Rent	1 House	2 Houses	3 Houses	4 Houses	Hotel
GO	0		+200								
Mediterranean Ave.	1	Purple/Brown	60	30	50	2	10	30	90	160	250
COMMUNITY CHEST	2										
Baltic Ave.	3	Purple/Brown	60	30	50	4	20	60	180	320	450
INCOME TAX	4		-200/10%								
Reading RR	5	Railroad	200	100			25	50	100	250	
Oriental Ave.	6	Light Blue	100	50	50	6	30	90	270	400	550
CHANCE	7										
Vermont Ave.	8	Light Blue	100	50	50	6	30	90	270	400	550
Connecticut Ave.	9	Light Blue	120	60	50	8	40	100	300	450	600
JAIL / JUST VISITING	10										
St. Charles Place	11	Light Purple	140	70	100	10	50	150	450	625	750
Electric Company	12	Utility	150	75			4x	10x			
States Ave.	13	Light Purple	140	70	100	10	50	150	450	625	750
Virginia Ave.	14	Light Purple	160	80	100	12	60	180	500	700	900
Pennsylvania RR	15	Railroad	200	100			25	50	100	250	
St. James Place	16	Orange	180	90	100	14	70	200	550	700	900
COMMUNITY CHEST	17										
Tennessee Ave.	18	Orange	180	90	100	14	70	200	550	700	900
New York Ave.	19	Orange	200	100	100	16	80	220	600	800	1000
FREE PARKING	20										
Kentucky Ave.	21	Red	220	110	150	18	90	250	700	875	1050
CHANCE	22										
Indiana Ave.	23	Red	220	110	150	18	90	250	700	875	1050
Illinois Ave.	24	Red	240	120	150	20	100	300	750	925	1100
B&O RR	25	Railroad	200	100			25	50	100	250	
Atlantic Ave.	26	Yellow	260	130	150	22	110	330	800	975	1150
Ventnor Ave.	27	Yellow	260	130	150	22	110	330	800	975	1150
Water Works	28	Utility	150	75			4x	10x			
Marvin Gardens	29	Yellow	280	140	150	24	120	360	850	125	1200
GO TO JAIL	30										
Pacific Ave.	31	Green	300	150	200	26	130	390	900	1100	1275
North Carolina Ave.	32	Green	300	150	200	26	130	390	900	1100	1275
COMMUNITY CHEST	33										
Pennsylvania Ave.	34	Green	320	160	200	28	150	450	100	1200	1400
Short Line	35	Railroad	200	100			25	50	100	250	
CHANCE	36										
Park Place	37	Dark Blue	350	175	200	35	175	500	1100	1300	1500
Luxury Tax	38		-75								
Boardwalk	39	Dark Blue	400	200	200	50	200	600	1400	1700	2000

<sup>1</sup> Money Sack added in 1999; Train included in Deluxe Edition only



2.4.3 Chess

a b c d e f g h

8

7

6

5

4

3

2

1

a

b

c

d

e

f

g

h

Piece	Notation	Points
King	K	
Queen	Q	9
Bishop	B	3
Knight	N	3
Rook	R	5
Pawn		1

Notation	
Move	<PIECE><dest.file>< dest.rank>
Ambiguous Move	<PIECE><dest.file><dest.rank><src.rank or src.file>
Capture	<PIECE>x<dest.file><dest.rank>
Pawn Capture	<src.file>x<dest.file><dest.rank>
Pawn Promotion	<dest.file><dest.rank><PROMOTED PIECE>
Kingside Castle	O-O
Queenside Castle	O-O-O
Check	<move>+

2.4.4 Checkers

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29

30

31

32

Notation	
Move	<src>-<dest>
Only Move	*
White Wins	WW
Red Wins	RW

2.4.5    Bingo

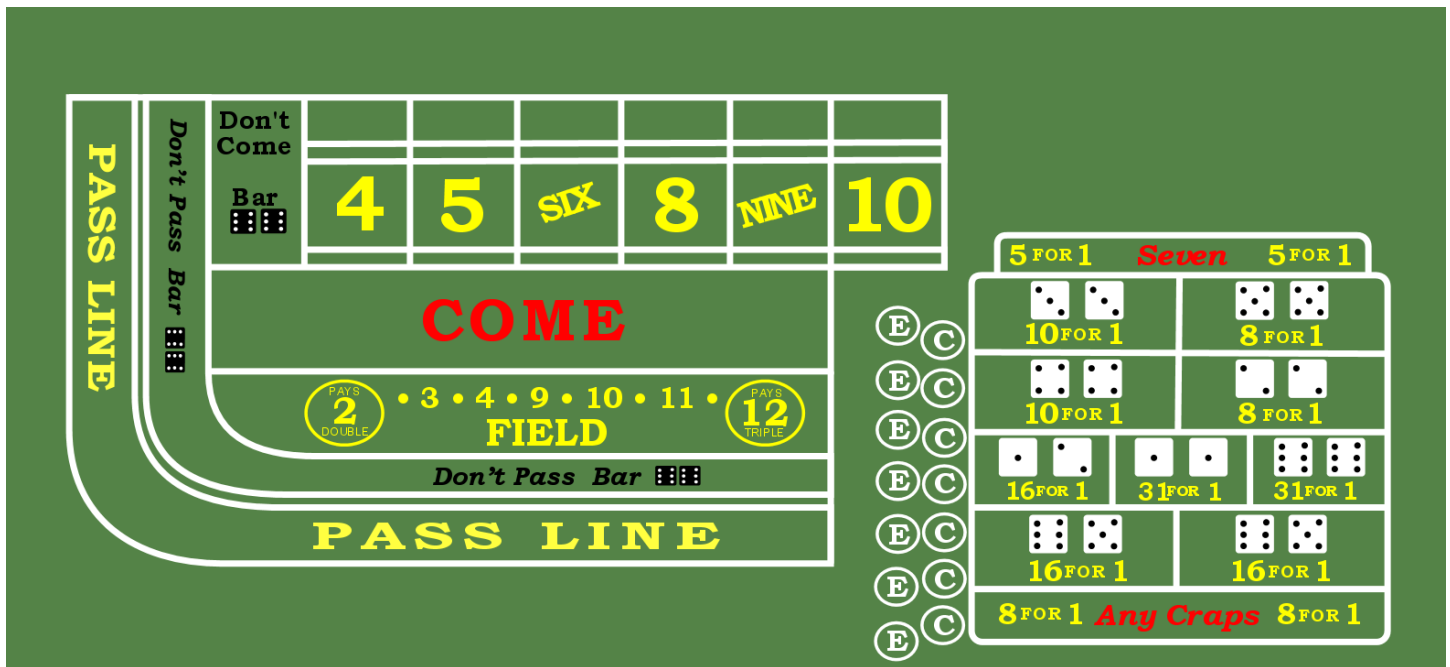
B	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
I	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
N	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
G	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
O	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75

2.4.6    Poker

Hands
Royal Flush
Straight Flush
Four of a Kind
Full House
Flush
Straight
Three of a Kind
Two Pair
Pair
High Card



## 2.4.7 Craps



Bet	Odds	Payout
Pass / Come	251:244	1:1
Don't Pass / Don't Come	1031:949	1:1
Pass Odds / Come Odds (4 or 10)	2:1	2:1
Pass Odds / Come Odds (5 or 9)	3:2	3:2
Pass Odds / Come Odds (6 or 8)	5:5	5:5
Don't Pass Odds / Don't Come Odds (4 or 10)	1:2	1:2
Don't Pass Odds / Don't Come Odds (5 or 9)	2:3	2:3
Don't Pass Odds / Don't Come Odds (6 or 8)	5:6	5:6
2	35:1	30:1
3	17:1	15:1
11 (Yo)	17:1	15:1
12	35:1	30:1
Hi-Lo	17:1	15:1
Craps	8:1	7:1
C&E	5:1	3:1 on craps, 7:1 on 11
Any 7	5:1	4:1
Field	5:4	1:1 on 3,4,9,10,11, 2:1 on 2 or 12
Horn	5:1	27:4 on 2 or 12, 3:1 on 3 or 11
Whirl / World	2:1	26:5 on 2 or 12, 11:5 on 3 or 11, 0:1 on 7
Hard Way (4 or 10)	8:1	7:1
Hard Way (6 or 8)	10:1	9:1
Big (6 or 8)	6:5	1:1
Place (4 or 10)	2:1	9:5
Place (5 or 9)	3:2	7:5
Place (6 or 8)	6:5	7:6
Buy (4 or 10)	2:1	2:1 + 5% comission
Buy (5 or 9)	3:2	3:2 + 5% comission
Buy (6 or 8)	6:5	6:5 + 5% comission
Lay (4 or 10)	1:2	1:2 + 5% comission
Lay (5 or 9)	2:3	2:3 + 5% comission
Lay (6 or 8)	5:6	5:6 + 5% comission

	1	2	3	4	5	6
1	Snake Eyes	Ace Deuce	Easy Four	Five	Easy Six	Natural
2	Ace Deuce	Hard Four	Five	Easy Six	Natural	Easy Eight
3	Easy Four	Five	Hard Six	Natural	Easy Eight	Nine
4	Five	Easy Six	Natural	Hard Eight	Nine	Easy Ten
5	Easy Six	Natural	Easy Eight	Nine	Hard Ten	Yo
6	Natural	Easy Eight	Nine	Easy Ten	Yo	Boxcars

## 2.4.8 American Roulette

		0		00	
1 to 18	1st 12	1	2	3	
		4	5	6	
Even		7	8	9	
		10	11	12	
Red	2nd 12	13	14	15	
		16	17	18	
Black		19	20	21	
		22	23	24	
Odd	3rd 12	25	26	27	
		28	29	30	
19-36		31	32	33	
		34	35	36	
		2 to 1	2 to 1	2 to 1	



Bet	Description	Odds	Payout
0	0	37:1	35:1
00	00	37:1	35:1
Straight Up	Single Number	37:1	35:1
Row 00	0,00	18:1	17:1
Split	Two Adjoining	18:1	17:1
Trio	0,1,2 or 00,2,3	35:3	11:1
Street	Row of Three	35:3	11:1
Corner	Block of Four	17:2	8:1
Five Number	0,00,1,2,3	17:2	6:1
Six Line	Two Adjacent Rows	16:3	5:1
Column	Column	13:6	2:1
Dozen	1-12, 13-24, or 25-36	13:6	2:1
Odd / Even	Odd or Even	10:9	1:1
Red / Black	Red or Black	10:9	1:1
1 to 18 / 29 to 36	1-18 or 29-36	10:9	1:1

## 2.5 Sports

### 2.5.1 Super Bowl

#	Year	Venue	Winner				Loser
1	1967	Los Angeles Memorial Coliseum	Green Bay Packers	NFL	35	Kansas City Chiefs	AFL 10
2	1968	Miami Orange Bowl	Green Bay Packers	NFL	33	Oakland Raiders	AFL 14
3	1969	Miami Orange Bowl	New York Jets	AFL	16	Baltimore Colts	NFL 7
4	1970	Tulane Stadium	Kansas City Chiefs	AFL	23	Minnesota Vikings	NFL 7
5	1971	Miami Orange Bowl	Baltimore Colts	AFC	16	Dallas Cowboys	NFC 13
6	1972	Tulane Stadium	Dallas Cowboys	NFC	24	Miami Dolphins	AFC 3
7	1973	Los Angeles Memorial Coliseum	Miami Dolphins	AFC	14	Washington Redskins	NFC 7
8	1974	Rice Stadium	Miami Dolphins	AFC	24	Minnesota Vikings	NFC 7
9	1975	Tulane Stadium	Pittsburgh Steelers	AFC	16	Minnesota Vikings	NFC 6
10	1976	Miami Orange Bowl	Pittsburgh Steelers	AFC	21	Dallas Cowboys <sup>1</sup>	NFC 17
11	1977	Rose Bowl Stadium	Oakland Raiders	AFC	32	Minnesota Vikings	NFC 14
12	1978	Louisiana Superdome	Dallas Cowboys	NFC	27	Denver Broncos	AFC 10
13	1979	Miami Orange Bowl	Pittsburgh Steelers	AFC	35	Dallas Cowboys	NFC 31
14	1980	Rose Bowl Stadium	Pittsburgh Steelers	AFC	31	Los Angeles Rams	NFC 19
15	1981	Louisiana Superdome	Oakland Raiders <sup>1</sup>	AFC	27	Philadelphia Eagles	NFC 10
16	1982	Pontiac Silverdome	San Francisco 49ers	NFC	26	Cincinnati Bengals	AFC 21
17	1983	Rose Bowl Stadium	Washington Redskins	NFC	27	Miami Dolphins	AFC 17
18	1984	Tampa Stadium	Los Angeles Raiders	AFC	38	Washington Redskins	NFC 9
19	1985	Stanford Stadium	San Francisco 49ers	NFC	38	Miami Dolphins	AFC 16
20	1986	Louisiana Superdome	Chicago Bears	NFC	46	New England Patriots <sup>1</sup>	AFC 10
21	1987	Rose Bowl Stadium	New York Giants	NFC	39	Denver Broncos	AFC 20
22	1988	Jack Murphy Stadium	Washington Redskins	NFC	42	Denver Broncos	AFC 10
23	1989	Joe Robbie Stadium	San Francisco 49ers	NFC	20	Cincinnati Bengals	AFC 16
24	1990	Louisiana Superdome	San Francisco 49ers	NFC	55	Denver Broncos	AFC 10
25	1991	Tampa Stadium	New York Giants	NFC	20	Buffalo Bills	AFC 19
26	1992	Metrodome	Washington Redskins	NFC	37	Buffalo Bills	AFC 24
27	1993	Rose Bowl Stadium	Dallas Cowboys	NFC	52	Buffalo Bills <sup>1</sup>	AFC 17
28	1994	Georgia Dome	Dallas Cowboys	NFC	30	Buffalo Bills	AFC 13
29	1995	Joe Robbie Stadium	San Francisco 49ers	NFC	49	San Diego Chargers	AFC 26
30	1996	Sun Devil Stadium	Dallas Cowboys	NFC	27	Pittsburgh Steelers	AFC 17
31	1997	Louisiana Superdome	Green Bay Packers	NFC	35	New England Patriots	AFC 21
32	1998	Qualcomm Stadium	Denver Broncos <sup>1</sup>	AFC	31	Green Bay Packers	NFC 24
33	1999	Pro Player Stadium	Denver Broncos	AFC	34	Atlanta Falcons	NFC 19
34	2000	Georgia Dome	St. Louis Rams	NFC	23	Tennessee Titans <sup>1</sup>	AFC 16
35	2001	Raymond James Stadium	Baltimore Ravens <sup>1</sup>	AFC	34	New York Giants	NFC 7
36	2002	Louisiana Superdome	New England Patriots	AFC	20	St. Louis Rams	NFC 17
37	2003	Qualcomm Stadium	Tampa Bay Buccaneers	NFC	48	Oakland Raiders	AFC 21
38	2004	Reliant Stadium	New England Patriots	AFC	32	Carolina Panthers	NFC 29
39	2005	ALLTEL Stadium	New England Patriots	AFC	24	Philadelphia Eagles	NFC 21
40	2006	Ford Field	Pittsburgh Steelers <sup>1</sup>	AFC	21	Seattle Seahawks	NFC 10
41	2007	Dolphin Stadium	Indianapolis Colts	NFC	29	Chicago Bears	NFC 17
42	2008	University of Phoenix Stadium	New York Giants <sup>1</sup>	NFC	17	New England Patriots	AFC 14

Team	T	W	L
Dallas Cowboys	8	5	3
Pittsburgh Steelers	6	5	1
New England Patriots	6	3	3
San Francisco 49ers	5	5	0
Oakland Raiders	5	3	2
Washington Redskins	5	3	2
Green Bay Packers	4	3	1
New York Giants	4	3	1
Denver Broncos	6	2	4
Miami Dolphins	5	2	3
Indianapolis Colts	3	2	1
St. Louis Rams	3	1	2
Chicago Bears	2	1	1
Kansas City Chiefs	2	1	1
Baltimore Ravens	1	1	0
New York Jets	1	1	0

Team	T	W	L
Tampa Bay Buccaneers	1	1	0
Buffalo Bills	4	0	4
Minnesota Vikings	4	0	4
Cincinnati Bengals	2	0	2
Philadelphia Eagles	2	0	2
Atlanta Falcons	1	0	1
Carolina Panthers	1	0	1
San Diego Chargers	1	0	1
Seattle Seahawks	1	0	1
Tennessee Titans	1	0	1
St. Louis Cardinals	0	0	0
Detroit Lions	0	0	0
Cleveland Browns	0	0	0
New Orleans Saints	0	0	0
Jacksonville Jaguars	0	0	0
Houston Texans	0	0	0

<sup>1</sup> Wildcard Team

2.5.2 World Series

#	Year	G	Winner	Loser	
1	1903	8	Boston Americans	Pittsburgh Pirates	AL 3
2	1905	5	New York Giants	Philadelphia Athletics	NL 1
3	1906	7	Chicago White Sox	Chicago Cubs	NL 2
4	1907	4	Chicago Cubs	Detroit Tigers	AL 0
5	1908	5	Chicago Cubs	Detroit Tigers	AL 1
6	1909	8	Pittsburgh Pirates	Detroit Tigers	AL 3
7	1910	5	Philadelphia Athletics	Chicago Cubs	NL 1
8	1911	6	Philadelphia Athletics	New York Giants	NL 2
9	1912	7	Boston Red Sox	New York Giants	NL 3
10	1913	5	Philadelphia Athletics	New York Giants	NL 1
11	1914	4	Boston Braves	Philadelphia Athletics	AL 0
12	1915	5	Boston Red Sox	Philadelphia Phillies	NL 1
13	1916	5	Boston Red Sox	Brooklyn Robins	NL 1
14	1917	6	Chicago White Sox	New York Giants	NL 2
15	1918	6	Boston Red Sox	Chicago Cubs	NL 2
16	1919	8	Cincinnati Reds	Chicago White Sox	AL 3
17	1920	7	Cleveland Indians	Brooklyn Robins	NL 2
18	1921	8	New York Giants	New York Yankees	AL 3
19	1922	4	New York Giants	New York Yankees	AL 0
20	1923	6	New York Yankees	New York Giants	NL 2
21	1924	7	Washington Senators	New York Giants	NL 3
22	1925	7	Pittsburgh Pirates	Washington Senators	AL 3
23	1926	7	St. Louis Cardinals	New York Yankees	AL 3
24	1927	4	New York Yankees	Pittsburgh Pirates	NL 0
25	1928	4	New York Yankees	St. Louis Cardinals	NL 0
26	1929	5	Philadelphia Athletics	Chicago Cubs	NL 1
27	1930	6	Philadelphia Athletics	St. Louis Cardinals	NL 2
28	1931	7	St. Louis Cardinals	Philadelphia Athletics	AL 3
29	1932	4	New York Yankees	Chicago Cubs	NL 0
30	1933	5	New York Yankees	Washington Senators	AL 1
31	1934	7	St. Louis Cardinals	Detroit Tigers	AL 3
32	1935	6	Detroit Tigers	Chicago Cubs	NL 2
33	1936	6	New York Yankees	New York Giants	NL 2
34	1937	5	New York Yankees	New York Giants	NL 1
35	1938	4	New York Yankees	Chicago Cubs	NL 0
36	1939	4	New York Yankees	Cincinnati Reds	NL 0
37	1940	7	Cincinnati Reds	Detroit Tigers	AL 3
38	1941	5	New York Yankees	Brooklyn Dodgers	NL 1
39	1942	5	St. Louis Cardinals	New York Yankees	AL 1
40	1943	5	New York Yankees	St. Louis Cardinals	NL 1
41	1944	6	St. Louis Cardinals	St. Louis Browns	AL 2
42	1945	7	Detroit Tigers	Chicago Cubs	NL 3
43	1946	7	St. Louis Cardinals	Boston Red Sox	AL 3
44	1947	7	New York Yankees	Brooklyn Dodgers	NL 3
45	1948	6	Cleveland Indians	Boston Braves	NL 2
46	1949	5	New York Yankees	Brooklyn Dodgers	NL 1
47	1950	4	New York Yankees	Philadelphia Phillies	NL 0
48	1951	6	New York Yankees	New York Giants	NL 2
49	1952	7	New York Yankees	Brooklyn Dodgers	NL 3
50	1953	6	New York Yankees	Brooklyn Dodgers	NL 2
51	1954	4	New York Giants	Cleveland Indians	AL 0

#	Year	G	Winner	Loser	MVP
52	1955	7	Brooklyn Dodgers	New York Yankees	AL 3 Johnny Podres
53	1956	7	New York Yankees	Brooklyn Dodgers	NL 3 Don Larsen
54	1957	7	Milwaukee Braves	New York Yankees	AL 3 Lew Burdette
55	1958	7	New York Yankees	Milwaukee Braves	NL 3 Bob Turley
56	1959	6	Los Angeles Dodgers	Chicago White Sox	AL 2 Larry Sherry
57	1960	7	Pittsburgh Pirates	New York Yankees	AL 3 Bobby Richardson (New York)
58	1961	5	New York Yankees	Cincinnati Reds	NL 1 Whitey Ford
59	1962	7	New York Yankees	San Francisco Giants	NL 3 Ralph Terry
60	1963	4	Los Angeles Dodgers	New York Yankees	AL 0 Sandy Koufax
61	1964	7	St. Louis Cardinals	New York Yankees	AL 3 Bob Gibson
62	1965	7	Los Angeles Dodgers	Minnesota Twins	AL 3 Sandy Koufax
63	1966	4	Baltimore Orioles	Los Angeles Dodgers	NL 0 Frank Robinson
64	1967	7	St. Louis Cardinals	Boston Red Sox	AL 3 Bob Gibson
65	1968	7	Detroit Tigers	St. Louis Cardinals	BL 3 Mickey Lolich
66	1969	5	New York Mets	Baltimore Orioles	AL 1 Donn Clendenon
67	1970	5	Baltimore Orioles	Cincinnati Reds	NL 1 Brooks Robinson
68	1971	7	Pittsburgh Pirates	Baltimore Orioles	AL 3 Roberto Clemente
69	1972	7	Oakland Athletics	Cincinnati Reds	NL 3 Gene Tenace
70	1973	7	Oakland Athletics	New York Mets	NL 3 Reggie Jackson
71	1974	5	Oakland Athletics	Los Angeles Dodgers	NL 1 Rollie Fingers
72	1975	7	Cincinnati Reds	Boston Red Sox	AL 3 Pete Rose
73	1976	4	Cincinnati Reds	New York Yankees	AL 0 Johnny Bench
74	1977	6	New York Yankees	Los Angeles Dodgers	NL 2 Reggie Jackson
75	1978	6	New York Yankees	Los Angeles Dodgers	NL 2 Bucky Dent
76	1979	7	Pittsburgh Pirates	Baltimore Orioles	AL 3 Willie Stargell
77	1980	6	Philadelphia Phillies	Kansas City Royals	AL 2 Mike Schmidt
78	1981	6	Los Angeles Dodgers	New York Yankees	AL 2 Ron Cey, Pedro Guerrero and Steve Yeager
79	1982	7	St. Louis Cardinals	Milwaukee Brewers	AL 3 Darrell Porter
80	1983	5	Baltimore Orioles	Philadelphia Phillies	NL 1 Rick Dempsey
81	1984	5	Detroit Tigers	San Diego Padres	NL 1 Alan Trammell
82	1985	7	Kansas City Royals	St. Louis Cardinals	NL 3 Bret Saberhagen
83	1986	7	New York Mets	Boston Red Sox	AL 3 Ray Knight
84	1987	7	Minnesota Twins	St. Louis Cardinals	NL 3 Frank Viola
85	1988	5	Los Angeles Dodgers	Oakland Athletics	AL 1 Orel Hershiser
86	1989	4	Oakland Athletics	San Francisco Giants	NL 0 Dave Stewart
87	1990	4	Cincinnati Reds	Oakland Athletics	AL 0 José Rijo
88	1991	7	Minnesota Twins	Atlanta Braves	NL 3 Jack Morris
89	1992	6	Toronto Blue Jays	Atlanta Braves	NL 2 Pat Borders
90	1993	6	Toronto Blue Jays	Philadelphia Phillies	NL 2 Paul Molitor
91	1995	6	Atlanta Braves	Cleveland Indians	AL 2 Tom Glavine
92	1996	6	New York Yankees	Atlanta Braves	NL 2 John Wetteland
93	1997	7	Florida Marlins <sup>1</sup>	Cleveland Indians	AL 3 Liván Hernández
94	1998	4	New York Yankees	San Diego Padres	NL 0 Scott Brosius
95	1999	4	New York Yankees	Atlanta Braves	NL 0 Mariano Rivera
96	2000	5	New York Yankees	New York Mets <sup>1</sup>	AL 1 Derek Jeter
97	2001	7	Arizona Diamondbacks	New York Yankees	AL 3 Randy Johnson and Curt Schilling
98	2002	7	Anaheim Angels <sup>1</sup>	San Francisco Giants <sup>1</sup>	NL 3 Troy Glauz
99	2003	6	Florida Marlins <sup>1</sup>	New York Yankees	AL 2 Josh Beckett
100	2004	5	Boston Red Sox <sup>1</sup>	St. Louis Cardinals	NL 0 Manny Ramírez
101	2005	5	Chicago White Sox	Houston Astros <sup>1</sup>	NL 0 Jermaine Dye
102	2006	5	St. Louis Cardinals	Detroit Tigers <sup>1</sup>	AL 1 David Eckstein
103	2007	4	Boston Red Sox	Colorado Rockies	NL 0 Mike Lowell
104	2008	5	Philadelphia Phillies	Tampa Bay Rays	AL 1 Cole Hamels



Team	T	W	L
New York Yankees	39	26	13
St. Louis Cardinals	17	10	7
Oakland Athletics	14	9	5
Boston Red Sox	11	7	4
Los Angeles Dodgers	18	6	12
San Francisco Giants	17	5	12
Cincinnati Reds	9	5	4
Pittsburgh Pirates	7	5	2
Detroit Tigers	10	4	6
Atlanta Braves	9	3	6
Baltimore Orioles	7	3	4
Minnesota Twins	6	3	3
Chicago White Sox	5	3	2
Chicago Cubs	10	2	8
Philadelphia Phillies	6	2	4
Cleveland Indians	5	2	3

Team	T	W	L
Cleveland Indians	5	2	3
New York Mets	4	2	2
Florida Marlins	2	2	0
Toronto Blue Jays	2	2	0
Kansas City Royals	2	1	1
Arizona Diamondbacks	1	1	0
Los Angeles Angels of Anaheim	1	1	0
San Diego Padres	0	0	2
Houston Astros	1	0	1
Milwaukee Brewers	1	0	1
Colorado Rockies	1	0	1
Tampa Bay Rays	1	0	1
Seattle Mariners	0	0	0
Texas Rangers	0	0	0
Washington Nationals	0	0	0

<sup>1</sup> Wildcard Team

## 2.5.3 Olympic Games

Summer					
#	Year	Host			
1	1896	Athens	Greece	GRE	
2	1900	Paris	France	FRA	
3	1904	St. Louis	United States	USA	
4	1908	London	Great Britain	GBR	
5	1912	Stockholm	Sweden	SWE	
6	1916	Berlin	Germany	GER	
7	1920	Antwerp	Belgium	BEL	
8	1924	Paris	France	FRA	
9	1928	Amsterdam	Netherlands	NED	
10	1932	Los Angeles	United States	USA	
11	1936	Berlin	Germany	GER	
12 <sup>1</sup>	1940	Tokyo	Japan	JPN	
13 <sup>1</sup>	1944	London	Great Britain	GBR	
14	1948	London	Great Britain	GBR	
15	1952	Helsinki	Finland	FIN	
16	1956	Melbourne Stockholm	Australia Sweden	AUS SWE	 
17	1960	Rome	Italy	ITA	
18	1964	Tokyo	Japan	JPN	
19	1968	Mexico City	Mexico	MEX	
20	1972	Munich	Germany	GER	
21	1976	Montreal	Canada	CAN	
22	1980	Moscow	Soviet Union	URS	
23	1984	Los Angeles	United States	USA	
24	1988	Seoul	South Korea	KOR	
25	1992	Barcelona	Spain	ESP	
26	1996	Atlanta	United States	USA	
27	2000	Sydney	Australia	AUS	
28	2004	Athens	Greece	GRE	
29	2008	Beijing	China	CHN	
30	2012	London	Great Britain	GBR	

Winter					
#	Year	Host			
1	1924	Chamonix	France	FRA	
2	1928	St. Moritz	Switzerland	SUI	
3	1932	Lake Placid	United States	USA	
4	1936	Garmisch-Partenkirchen	Germany	GER	
5 <sup>1</sup>	1940	Sapporo	Japan	JPN	
5 <sup>1</sup>	1944	Cortina d'Ampezzo	Italy	ITA	
5	1948	St. Moritz	Switzerland	SUI	
6	1952	Oslo	Norway	NOR	
7	1956	Cortina d'Ampezzo	Italy	ITA	
8	1960	Squaw Valley	United States	USA	
9	1964	Innsbruck	Austria	AUT	
10	1968	Grenoble	France	FRA	
11	1972	Sapporo	Japan	JPN	
12	1976	Innsbruck	Austria	AUT	
13	1980	Lake Placid	United States	USA	
14	1984	Sarajevo	Yugoslavia	YUG	
15	1988	Calgary	Canada	CAN	
17	1994	Lillehammer	Norway	NOR	
18	1998	Nagano	Japan	JPN	
19	2010	Vancouver	Canada	CAN	
20	2014	Sochi	Russia	RUS	

<sup>1</sup> Canceled due to WWII; Note that standard Winter Game numbering does not include these years.

## 2.6 Literature

### 2.6.1 Books of the Bible<sup>1</sup>

Old Testament	
1	Genesis
2	Exodus
3	Leviticus
4	Numbers
5	Deuteronomy
6	Joshua
7	Judges
8	Ruth
9	I Samuel
10	II Samuel
11	I Kings
12	II Kings
13	I Chronicles
14	II Chronicles
15	Ezra
16	Nehemiah
17	Esther
18	Job
19	Psalms
20	Proverbs
21	Ecclesiastes
22	Song of Solomon
23	Isaiah
24	Jeremiah
25	Lamentations
26	Ezekiel
27	Daniel
28	Hosea
29	Joel
30	Amos
31	Obadiah
32	Jonah
33	Micah
34	Nahum
35	Habakkuk
36	Zephaniah
37	Haggai
38	Zechariah
39	Malachi

New Testament	
1	Matthew
2	Mark
3	Luke
4	John
5	Acts
6	Romans
7	I Corinthians
8	II Corinthians
9	Galatians
10	Ephesians
11	Philippians
12	Colossians
13	I Thessalonians
14	II Thessalonians
15	I Timothy
16	II Timothy
17	Titus
18	Philemon
19	Hebrews
20	James
21	I Peter
22	II Peter
23	I John
24	II John
25	III John
26	Jude
27	Revelation

Apocrypha	
1	I Esdras
2	II Esdras
3	Tobit
4	Judith
5	The Rest of Esther
6	The Wisdom of Solomon
7	Ecclesiasticus (Sirach)
8	Baruch, with the Letter of Jeremiah
9	The Song of the Three Jews with the Prayer of Azariah
10	The Story of Susanna
11	Bel and the Dragon
12	The Prayer of Manasseh
13	I Maccabees
14	II Maccabees
15	III Maccabees

<sup>1</sup> According to the King James Bible. The situation is a good deal more complicated than this, as different faiths and denominations omit, recombine, and order books differently. Wikipedia attempts to address this confusion at [en.wikipedia.org/wiki/Books\\_of\\_the\\_Bible](https://en.wikipedia.org/wiki/Books_of_the_Bible)

## 2.6.2 Literary Alphabets

	Edward Gorey	Sue Grafton
<b>A</b>	Amy who fell down the stairs	Alibi
<b>B</b>	Basil assaulted by bears	Burglar
<b>C</b>	Clara who wasted away	Corpse
<b>D</b>	Desmond thrown out of a sleigh	Deadbeat
<b>E</b>	Ernest who choked on a peach	Evidence
<b>F</b>	Fanny sucked dry by a leech	Fugitive
<b>G</b>	George smothered under a rug	Gumshoe
<b>H</b>	Hector done in by a thug	Homicide
<b>I</b>	Ida who drowned in a lake	Innocent
<b>J</b>	James who took lye by mistake	Judgment
<b>K</b>	Kate who was struck with an axe	Killer
<b>L</b>	Leo who swallowed some tacks	Lawless
<b>M</b>	Maud who was swept out to sea	Malice
<b>N</b>	Neville who died of ennui	Noose
<b>O</b>	Olive run through with an awl	Outlaw
<b>P</b>	Prue trampled flat in a brawl	Peril
<b>Q</b>	Quentin who sank on a mire	Quarry
<b>R</b>	Rhoda consumed by a fire	Ricochet
<b>S</b>	Susan who perished of fits	Silence
<b>T</b>	Titus who flew into bits	Trespass
<b>U</b>	Una who slipped down a drain	
<b>V</b>	Victor squashed under a train	
<b>W</b>	Winnie embedded in ice	
<b>X</b>	Xerxes devoured by mice	
<b>Y</b>	Yorick whose head was knocked in	
<b>Z</b>	Zillah who drank too much gin	

## 2.7 Government and Politics

### 2.7.1 Common Phonetic Alphabets<sup>1</sup>

	NATO	Western Union	British Forces	RAF	Telecom B	British A	NYPD	French	German	Italian	Spanish
<b>A</b>	Alfa	Adams	Abel	Apple	Alfred	Amsterdam	Adam	Anatole	Anton	Ancona	Antonio
<b>Ä</b>									Ärger		
<b>B</b>	Bravo	Boston	Baker	Beer	Benjamin	Baltimore	Boy	Berthe	Berta	Bologna	Barcelona
<b>C</b>	Charlie	Chicago	Charlie	Charlie	Charles	Casablanca	Charlie	Célestin	Cäsar	Como	Carmen
<b>Ch</b>									Charlotte		Chocolate
<b>D</b>	Delta	Denver	Dog	Dog	David	Denmark	David	Désiré	Dora	Domodossola	Dolores
<b>E</b>	Echo	Easy	Easy	Edward	Edward	Edison	Edward	Eugène	Emil	Empoli	Enrique
<b>É</b>								Émile			
<b>F</b>	Foxtrot	Frank	Fox	Freddy	Frederick	Florida	Frank	François	Friedrich	Firenze	Francia
<b>G</b>	Golf	George	George	George	George	Gallipoli	George	Gaston	Gustav	Genova	Gerona
<b>H</b>	Hotel	Henry	How	Harry	Harry	Havana	Henry	Henri	Heinrich	Hotel	Historia
<b>I</b>	India	Ida	Item	In	Isaac	Italia	Ida	Irma	Ida	Imola	Inés
<b>J</b>	Juliet	John	Jig	Jug/Johnny	Jack	Jerusalem	John	Joseph	Julius	I lunga	José
<b>K</b>	Kilo	King	King	King	King	Kilogram	King	Kléber	Kaufmann	Kursaal	Kilo
<b>L</b>	Lima	Lincoln	Love	Love	London	Liverpool	Lincoln	Louis	Ludwig	Livorno	Lorenzo
<b>Li</b>											Llobregat
<b>M</b>	Mike	Mary	Mike	Mother	Mary	Madagascar	Mary	Marcel	Martha	Milano	Madrid
<b>N</b>	November	New York	Nan	Nuts	Nellie	New York	Nora	Nicolas	Nordpol	Napoli	Navarra
<b>Ñ</b>											Ñoño
<b>O</b>	Oscar	Ocean	Oboe	Orange	Oliver	Oslo	Ocean	Oscar	Otto	Otranto	Oviedo
<b>Ö</b>									Ökonom		
<b>P</b>	Papa	Peter	Peter	Peter	Peter	Paris	Peter	Pierre	Paula	Padova	París
<b>Q</b>	Quebec	Queen	Queen	Queen	Queen	Quebec	Queen	Quintal	Quelle	Quarto	Querido
<b>R</b>	Romeo	Roger	Roger	Roger/Robert	Robert	Roma	Robert	Raoul	Richard	Roma	Ramón
<b>S</b>	Sierra	Sugar	Sugar	Suga	Samuel	Santiago	Sam	Suzanne	Samuel	Savona	Sábado
<b>Sch</b>									Schule		
<b>T</b>	Tango	Thomas	Tare	Tommy	Tommy	Tripoli	Tom	Thérèse	Theodor	Torino	Tarragona
<b>U</b>	Uniform	Union	Uncle	Uncle	Uncle	Uppsala	Union	Ursule	Ulrich	Udine	Ulises
<b>Ü</b>									Übermut		
<b>V</b>	Victor	Victor	Victor	Vic	Victor	Valencia	Victor	Victor	Viktor	Venezia	Valencia
<b>W</b>	Whisky	William	William	William	William	Washington	William	William	Wilhelm	Washington	Washington
<b>X</b>	X-ray	X-ray	X-Ray	X-ray	X-ray	Xantippe	X-ray	Xavier	Xanthippe	Ics	Xiquena
<b>Y</b>	Yankee	Young	Yoke	Yoke/Yorker	Yellow	Yokohama	Young	Yvonne	Ypsilon	York	Yegua
<b>Z</b>	Zulu	Zero	Zebra	Zebra	Zebra	Zürich	Zebra	Zoé	Zeppelin	Zara	Zaragoza

<sup>1</sup> A more complete list of phonetic alphabets can be found at [www.w2aee.columbia.edu/phonetic.html](http://www.w2aee.columbia.edu/phonetic.html)





## 2.7.2 Country Codes<sup>1</sup>

Country Name	ISO 2-alpha	ISO 3-alpha	IANA Internet	UN Vehicle	IOC Olympic	UN/ISO numeric	ITU calling
Afghanistan	AF	AFG	.af	AFG	AFG	004	93
Åland Islands	AX	ALA	.ax			248	
Albania	AL	ALB	.al	AL	ALB	008	355
Algeria (el Djanir)	DZ	DZA	.dz	GBA	ALG	012	213
American Samoa	AS	ASM	.as		ASA	016	1-684
Andorra	AD	AND	.ad	AND	AND	020	376
Angola	AO	AGO	.ao		ANG	024	244
Anguilla	AI	ALA	.ai			660	1-264
Antarctica	AQ	ATA			ANT	010	
Antigua and Barbuda	AG	ATG	.ag		ANT	028	1-268
Argentina	AR	ARG	.ar	RA	ARG	032	54
Armenia	AM	ARM	.am	AM	ARM	051	7
Aruba	AW	ABW	.aw		ARU	533	297
Ascension Island			.ac				247
Australia	AU	AUS	.au	AUS	AUS	036	61
Austria	AT	AUT	.at	A	AUT	040	43
Azerbaijan	AZ	AZE	.az	AZ	AZE	031	994
Bahamas	BS	BHS	.bs	BS	BAH	044	1-242
Bahrain	BH	BHR	.bh	BRN	BRN	048	973
Bangladesh	BD	BGD	.bd	BD	BAN	050	880
Barbados	BB	BBQ	.bb	BDB	BAR	052	1-246
Belarus	BY	BLR	.by	BY	BLR	112	375
Belgium	BE	BEL	.be	B	BEL	056	32
Belize	BZ	BLZ	.bz	BH	BIZ	084	501
Benin	BJ	BEN	.bj	DY	BEN	204	229
Bermuda	BM	BMU	.bm		BER	060	1-441
Bhutan	BT	BTN	.bt		BLU	064	975
Bolivia	BO	BOL	.bo	BOL	BOL	068	591
Bosnia and Herzegovina	BA	BIH	.ba	BIH	BIH	070	387
Botswana	BW	BWA	.bw	BW	BOT	072	267
Bouvet Island	BV	BVT	.bv			074	
Brazil	BR	BRA	.br	BR	BRA	076	55
British Indian Ocean Territory	IO	BOT				086	
Brown Dusselam	BN	BRN	.bn	BRU	BRU	096	673
Bulgaria	BG	BGR	.bg	BG	BUL	100	359
Burkina Faso	BF	BFA	.bf	BF	BUR	854	226
Burundi	BI	BDI	.bi	RU	BDI	108	257
Cambodia	KH	KHM	.kh	K	CAM	116	855
Cameroon	CM	CMR	.cm	CAM	CMR	120	237
Canada	CA	CAN	.ca	CDN	CAN	124	1
Cape Verde	CV	CPV	.cv		CPV	132	238
Cayman Islands	KY	CYM	.ky		CAY	136	1-345
Central African Republic	CF	CAF	.cf	RCA	CAF	140	236
Chad (Tchad)	TD	TCO	.td	TCH	CHA	148	235
Channel Islands						830	
Chile	CL	CHL	.cl	RCH	CHI	152	56
China	CN	CHN	.cn		CHN	156	86
Christmas Island	CX	CXR	.cx			162	
Cocos (Keeling) Islands	CC	CKK	.cc			166	
Colombia	CO	COL	.co	CO	COL	170	57
Comoros	KM	COM	.km		COM	174	269
Congo, Republic of	CG	COG	.cg	RCB	CGO	178	242
Congo, Democratic Republic of the (formerly Zaïre)	CD	COD	.cd	ZRE	COD	180	243
Cook Islands	CK	COK	.ck		COK	184	682
Costa Rica	CR	CRI	.cr	CR	CRC	188	506
Côte d'Ivoire (Ivory Coast)	CI	CIV	.ci	CI	CIV	384	225
Croatia (Bratska)	HR	HRV	.hr	HR	CRO	191	385
Cuba	CU	CUB	.cu	CU	CUB	192	53
Cyprus	CY	CYP	.cy	CY	CYP	196	357
Czech Republic	CZ	CZE	.cz	CZ	CZE	203	420
Denmark	DK	DNK	.dk	DK	DEN	208	45
Djibouti	DJ	DJI	.dj	DJI	DJI	262	253
Dominica	DM	DMA	.dm	WD	DMA	212	1-767
Dominican Republic	DO	DOM	.do	DOM	DOM	214	1-809
Ecuador	EC	ECU	.ec	EC	ECU	218	593
Egypt	EG	EGY	.eg	ET	EGY	818	20
El Salvador	SV	SLV	.sv	ES	ESA	222	503
Equatorial Guinea	GQ	GNQ	.gq		GEQ	226	240
Eritrea	ER	ERI	.er	ERI	ERI	232	291
Estonia	EE	EST	.ee	EST	EST	233	372
Ethiopia	ET	ETH	.et	ETH	ETH	231	251
European Union			.eu				
Faeroe Islands	FO	FRO	.fo	FR	FAR	234	298
Falkland Islands (Malvinas)	FK	FLK	.fk			238	500
Fiji	FJ	FJI	.fj	FJI	FJI	242	679
Finland	FI	FIN	.fi	FIN	FIN	246	358
France	FR	FRA	.fr	F	FRA	250	33
French Guinea	GF	GLF	.gf			254	594
French Polynesia	PF	PVF	.pf			258	689
French Southern Territories	TF	ATF	.tf			260	
Gabon	GA	GAB	.ga	G	GAB	266	241
Gambia, the	GM	GMB	.gm	WAG	GAM	270	220
Georgia	GE	GEO	.ge	GE	GEO	268	995
Germany (Deutschland)	DE	DEU	.de	D	GER	276	49
Ghana	GH	GHA	.gh	GH	GHA	288	233
Gibraltar	GI	GBR	.gi	GBZ		292	350
Great Britain	GB	GBR	.uk	GB	GBR	826	44
Greece	GR	GRC	.gr	GR	GRE	300	30
Greenland	GL	GRL	.gl	GR	GRE	304	299
Grenada	GD	GRD	.gd	WG	GRN	308	1-473
Guaadeloupe	GP	GLP	.gp			312	590
Guam	GU	GUM	.gu		GUM	316	1-671
Guatemala	GT	GTM	.gt	GCA	GUA	320	502
Guernsey	GG	GGY	.gg	GBG			
Guinea	GN	GNB	.gn	RG	GUI	324	224
Guinea-Bissau	GW	GNB	.gw		GBS	624	245
Guyana	GY	GUY	.gy	GUY	GUY	328	592
Haiti	HT	HTI	.ht	RH	HAI	332	509
Heard Island and McDonal Islands	HM	HMD	.hm			334	
Honduras	HN	HND	.hn	HON	HON	340	504
Hong Kong (special administrative region of China)	HK	HKG	.hk	HKG	HKG	344	852
Hungary	HU	HUN	.hu	H	HUN	348	36
Iceland	IS	ISL	.is	IS	ISL	352	354
India	IN	IND	.in	IND	IND	356	91
Indonesia	ID	IDN	.id	RI	INA	360	62
International organizations			.int				
Iran (Islamic Republic of Iran)	IR	IRN	.ir	IR	IRI	364	98
Iraq	IQ	IRQ	.iq	IRQ	IRQ	368	964
Ireland	IE	IRL	.ie	IRL	IRL	372	353
Isle of Man	IM	IMN	.im	GBM		833	
Israel	IL	ISR	.il	IL	ISR	376	972
Italy	IT	ITA	.it	I	ITA	380	39
Jamaica	JM	JAM	.jm	JA	JAM	388	1-876
Japan	JP	JPN	.jp	J	JPN	392	81
Jersey	JE	JEY	.je	GBJ			
Jordan (Hashemite Kingdom of Jordan)	JO	JOR	.jo	HKJ	JOR	400	962
Kazakhstan	KZ	KAZ	.kz	KZ	KAZ	398	7
Kenya	KE	KEN	.ke	EAK	KEN	404	254
Kiribati	KI	KIR	.ki		KIR	296	686
Korea (Democratic Peoples Republic of (North) Korea)	KP	PRK	.kp	PRK	PRK	408	850
Korea (Republic of (South) Korea)	KR	KOR	.kr	ROK	KOR	410	82
Kuwait	KW	KWT	.kw	KWT	KUW	414	965
Kyrgyzstan	KG	KGZ	.kg	KS	KGZ	417	996
Lao People's Democratic Republic	LA	LAO	.la	LAO	LAO	418	856
Latvia	LV	LVA	.lv	LV	LAT	428	371
Lebanon	LB	LBN	.lb	RL	LIB	422	961
Lesotho	LS	LSO	.ls	LS	LES	426	266

Country Name	ISO 2-alpha	ISO 3-alpha	IANA Internet	UN Vehicle	IOC Olympic	UN/ISO numeric	ITU calling
Liberia	LR	LBR	.lr	LB	LBR	430	231
Libya (Libyan Arab Jamahiriya)	LY	LYB	.ly	LAR	LBA	434	218
Liechtenstein (Fürstentum Liechtenstein)	LI	LIE	.li	FL	LJE	438	423
Lithuania	LT	LTU	.lt	L	LIT	440	370
Luxembourg	LU	LUX	.lu	LT	LUX	442	352
Macao (special administrative region of China)	MO	MAC	.mo			446	853
Macedonia (former Yugoslav Republic of Macedonia)	MK	MKD	.mk	MK	MKD	807	389
Madagascar	MG	MDG	.mg	RM	MAD	450	261
Malawi	MW	MWI	.mw	MW	MAW	454	265
Malaysia	MY	MYS	.my	MAL	MAS	458	60
Maldives	MV	MDV	.mv		MDV	462	960
Mali	ML	MLI	.ml	RMM	MLI	466	223
Malta	MT	MLT	.mt	M	MLT	470	356
Marshall Islands	MH	MHL	.mh		MHL	584	692
Martinique	MQ	MTQ	.mq			474	596
Mauritania	MR	MRT	.mr	RIM	MRT	478	222
Mauritius	MU	MUS	.mu	MS	MNI	480	230
Mayotte	YT	MYT	.yt			175	269
Mexico	MX	MEX	.mx	MEX	MEX	484	52
Micronesia (Federated States of Micronesia)	FM	FSM	.fm		FSM	583	691
Moldova	MD	MDA	.md	MD	MDA	498	373
Monaco	MC	MCO	.mc	MC	MON	492	377
Mongolia	MN	MNG	.mn	MGL	MGL	496	976
Montenegro	ME	MNE	.me	MNE	MNE	499	382
Montserrat	MS	MSR	.ms			500	1-664
Morocco	MA	MAR	.ma	MA	MAR	504	212
Mozambique (Moçambique)	MZ	MOZ	.mz	MOC	MOZ	508	258
Myanmar (formerly Burma)	MM	MMR	.mm	BUR	MYA	104	95
Namibia	NA	NAM	.na	NAM	NAM	516	264
Nauru	NR	NRU	.nr	NAU	NRU	520	674
Nepal	NP	NPL	.np	NEP	NEP	524	977
Netherlands	NL	NLD	.nl	NL	NED	528	31
Netherlands Antilles	AN	ANT	.an	NA	AHO	530	599
New Caledonia	NC	NCL	.nc			540	687
New Zealand	NZ	NZL	.nz	NZ	NZL	554	64
Nicaragua	NI	NIC	.ni	NIC	NCA	558	505
Niger	NE	NER	.ne	RN	NIG	562	227
Nigeria	NG	NGA	.ng	WAN	NGR	566	234
Niue	NU	NIU	.nu			570	683
Norfolk Island	NF	NFK	.nf			574	
Northern Mariana Islands	MP	MNP	.mp			580	1-670
Norway	NO	NOR	.no	N	NOR	578	47
Oman	OM	OMN	.om		OMA	512	968
Pakistan	PK	PAK	.pk	PK	PAK	586	92
Palau	PW	PLW	.pw		PLW	585	680
Palestinian territories	PS	PSE	.ps		PLE	275	970
Panama	PA	PAN	.pa	PA	PAN	591	507
Papua New Guinea	PG	PNG	.pg	PNG	PNG	598	675
Paraguay	PY	PRY	.py	PY	PAR	600	595
Peru	PE	PER	.pe	PE	PER	604	51
Philippines	PH	PHL	.ph	RP	PHI	608	63
Pitcairn	PN	PCN	.pn			612	
Poland	PL	POL	.pl	PL	POL	616	48
Portugal	PT	PRT	.pt	P	POR	620	351
Puerto Rico	PR	PRI	.pr		PUR	630	1
Qatar	QA	QAT	.qa	Q	QAT	634	974
Réunion	RE	REU	.re			638	262
Romania	RO	ROU	.ro	RO	ROU	642	40
Russian Federation	RU	RUS	.ru	RUS	RUS	653	7
Rwanda	RW	RWA	.rw	RWA	RWA	646	250
Saint Barthélemy	BL	BLM	.bl			652	
Saint Helena	SH	SHN	.sh			654	290
Saint Kitts and Nevis	KN	KNA	.kn		SKN	659	1-869
Saint Lucia	LC	LCA	.lc	WL	LCA	662	1-758
Saint Martin (French portion)	MF	MAF	.mf			663	
Saint Pierre and Miquelon	PM	SPM	.pm			666	508
Saint Vincent and the Grenadines	VC	VCT	.vc	WV	VIN	670	1-784
Samoa (formerly Western Samoa)	WS	WSM	.ws	WS	SAM	882	685
San Marino (Republic of)	SM	SMR	.sm	RSM	SMR	674	378
Sao Tome and Principe	ST	STP	.st		STP	678	239
Saudi Arabia (Kingdom of Saudi Arabia)	SA	SAU	.sa	SA	SAU	682	966
Senegal	SN	SEN	.sn	SN	SEN	686	221
Serbia (Republic of Serbia)	RS	SRB	.rs		SRB	688	381
Seychelles	SC	SYC	.sc	SY	SEY	690	248
Sierra Leone	SL	SLE	.sl	WAL	SLE	694	232
Singapore	SG	SGP	.sg	SGP	SIN	702	65
Slovakia (Slovak Republic)	SK	SVK	.sk	SK	SVK	703	421
Slovenia	SI	SVN	.si	SLO	SLO	705	386
Solomon Islands	SB	SLB	.sb		SOL	90	677
Somalia	SO	SOM	.so	SO	SOM	706	252
South Africa (Zuid Afrika)	ZA	ZAF	.za	ZA	RSA	710	27
South Georgia and the South Sandwich Islands	GS	SGS	.gs			239	
Soviet Union (internet code still used)			.su				
Spain (España)	ES	ESP	.es	E	ESP	724	34
Sri Lanka (formerly Ceylon)	LK	LKA	.lk	CL	SRI	144	94
Sudan	SD	SDN	.sd	SD	SUD	734	219
Suriname	SR	SUR	.sr	SME	SUR	740	597
Svalbard and Jan Mayen	SJ	SJM	.sj			744	
Swaziland	SZ	SWZ	.sz	SD	SWZ	748	268
Sweden	SE	SWE	.se	S	SWE	752	46
Switzerland (Confédération of Helvetia)	CH	CHE	.ch	CH	SWI	756	41
Syrian Arab Republic	SY	SYR	.sy	SYR	SYR	760	963
Taiwan (Chinese Taipei* for IOC)	TW	TWN	.tw		TPR	158	886
Tajikistan	TJ	TJK	.tj	TJ	TJK	762	992
Tanganyika				EAT			
Tanzania	TZ	TZA	.tz		TAN	834	255
Thailand	TH	THA	.th	T	THA	764	66
Timor-Leste (formerly East Timor)	TL	TLS	.tl		TLS	854	66
Togo	TG	TGO	.tg	TG	TOG	768	228
Tokelau	TK	TKL	.tk			772	690
Tonga	TO	TON	.to		TGA	776	676
Tuvalu and Togo	TT	TTO	.tt	TT	TTO	780	1-668
Tunisia	TN	TUN	.tn	TN	TUN	788	216
Turkey	TR	TUR	.tr	TR	TUR	792	90
Turkmenistan	TM	TKM	.tm	TM	TKM	795	993
Turks and Caicos Islands	TC	TCA	.tc			796	1-649
Tuvalu	TV	TUV	.tv		TUV	798	688
Uganda	UG	UGA	.ug	EAU	UGA	800	256
Ukraine	UA	UKR	.ua	UA	UKR	804	380
United Arab Emirates	AE	ARE	.ae		UAE	784	971
United States	US	USA	.us	USA	USA	840	1
United States minor outlying islands	UM	UMI	.um			881	
Uruguay	UY	URY	.uy	ROU	URU	858	598
Uzbekistan	UZ	UZB	.uz		UZB	860	978
Vanuatu	VU	VUT	.vu		VAN	548	678
Vatican City (Holy See)	VA	VAT	.va	V	VAT	336	379
Venezuela	VE	VEN	.ve	VV	VEN	862	58
Viet Nam	VN	VNM	.vn		VIE	704	84
Virgin Islands, British	VG	VBG	.vg	BVI	VBG	92	1-284
Virgin Islands, US	VI	VIR	.vi		VSU	850	1-340
Yugoslavia (internet code still used)			.yu				
Wallis and Futuna	WF	WLF	.wf			876	681
Western Sahara (formerly Spanish Sahara)	EH	ESH	.eh			732	
Yemen (Yemen Arab Republic)	YE	YEM	.ye	YAR	YEM	887	967
Zambia (formerly Northern Rhodesia)	ZM	ZMB	.zm	ZNR	ZAM	894	260
Zanzibar				EAZ			
Zimbabwe	ZW	ZWE	.zw	ZW	ZIM	716	263

### 2.7.3 US States and Territories

State/Possession	Flag	Abr.	Capital	Ord.
Alabama		AL	Montgomery	22
Alaska		AK	Juneau	49
American Samoa		AS	Fagatoga	
Arizona		AZ	Phoenix	48
Arkansas		AR	Little Rock	25
California		CA	Sacramento	31
Colorado		CO	Denver	38
Connecticut		CT	Hartford	5 <sup>1</sup>
Delaware		DE	Dover	1 <sup>1</sup>
District of Columbia		DC		
Federated States of Micronesia		FM	Palikir	
Florida		FL	Tallahassee	27
Georgia		GA	Atlanta	4 <sup>1</sup>
Guam		GU	Hagåtña	
Hawaii		HI	Honolulu	50
Idaho		ID	Boise	43
Illinois		IL	Springfield	21
Indiana		IN	Indianapolis	19
Iowa		IA	Des Moines	29
Kansas		KS	Topeka	34
Kentucky		KY	Frankfort	15
Louisiana		LA	Baton Rouge	18
Maine		ME	Augusta	23
Marshall Islands		MH	Majuro	
Maryland		MD	Annapolis	7 <sup>1</sup>
Massachusetts		MA	Boston	6 <sup>1</sup>
Michigan		MI	Lansing	26
Minnesota		MN	Saint Paul	32
Mississippi		MS	Jackson	20
Missouri		MO	Jefferson City	24
Montana		MT	Helena	41
Nebraska		NE	Lincoln	37
Nevada		NV	Carson City	36

State/Possession	Flag	Abr.	Capital	Ord.
New Hampshire		NH	Concord	9 <sup>1</sup>
New Jersey		NJ	Trenton	3 <sup>1</sup>
New Mexico		NM	Santa Fe	47
New York		NY	Albany	11 <sup>1</sup>
North Carolina		NC	Raleigh	12 <sup>1</sup>
North Dakota		ND	Bismarck	39 <sup>2</sup>
Northern Mariana Islands		MP	Saipan	
Ohio		OH	Columbus	17
Oklahoma		OK	Oklahoma City	46
Oregon		OR	Salem	33
Palau		PW	Melekeok	
Pennsylvania		PA	Harrisburg	2 <sup>1</sup>
Puerto Rico		PR	San Juan	
Rhode Island		RI	Providence	13 <sup>1</sup>
South Carolina		SC	Columbia	8 <sup>1</sup>
South Dakota		SD	Pierre	40 <sup>2</sup>
Tennessee		TN	Nashville	16
Texas		TX	Austin	28
Utah		UT	Salt Lake City	45
Vermont		VT	Montpelier	14
Virgin Islands		VI	Charlotte Amalie	
Virginia		VA	Richmond	10 <sup>1</sup>
Washington		WA	Olympia	42
West Virginia		WV	Charleston	35
Wisconsin		WI	Madison	30
Wyoming		WY	Cheyenne	44
Armed Forces Africa		AE		
Armed Forces Americas		AA		
Armed Forces Canada		AE		
Armed Forces Europe		AE		
Armed Forces Middle East		AE		
Armed Forces Pacific		AP		

<sup>1</sup> Original 13 States listed in order of Constitution ratification

<sup>2</sup> North and South Dakota admitted simultaneously, but North Dakota appears first in *Statutes at Large*

## 2.7.4 US Presidents

Term	Year	President		Party	Vice President		
1	1789	George Washington	1		John Adams	1	
2	1793						
3	1797	John Adams	2	Federalist	Thomas Jefferson	2	
4	1801	Thomas Jefferson	3	Democratic-Republican	Aaron Burr	3	
5	1805				George Clinton <sup>1</sup>	4	
6	1809	James Madison	4				
7	1813				Elbridge Gerry <sup>1</sup>	5	
8	1817	James Monroe	5			Daniel D. Tompkins	6
9	1821						
10	1825	John Quincy Adams	6			John C. Calhoun <sup>3</sup>	7
11	1829	Andrew Jackson	7		Democrat		
12	1833					Martin van Buren	8
13	1837	Martin van Buren	8	Democrat	Richard Mentor Johnson	9	
14	1841	William Henry Harrison <sup>1</sup>	9	Whig	John Tyler	10	
	1841	John Tyler	10				
15	1845	James Polk	11	Democrat	George M. Dallas	11	
16	1849	Zachary Taylor <sup>1</sup>	12	Whig	Millard Fillmore	12	
	1850	Millard Fillmore	13				
17	1853	Franklin Pierce	14	Democrat	William R. King <sup>1</sup>	13	
18	1857	James Buchanan	15		John C. Breckinridge	14	
19	1861	Abraham Lincoln <sup>2</sup>	16	Republican	Hannibal Hamlin	15	
20	1865			Democrat	Andrew Johnson	16	
	1865	Andrew Johnson	17				
21	1869	Ulysses S. Grant	18	Republican	Schuyler Colfax	17	
22	1873				Henry Wilson <sup>1</sup>	18	
23	1877	Rutherford B. Hayes	19		William A. Wheeler	19	
24	1881	James A. Garfield <sup>2</sup>	20			Chester A. Arthur	20
	1881	Chester A. Arthur	21				
25	1885	Grover Cleveland	22	Democrat	Thomas A. Hendricks <sup>1</sup>	21	
26	1889	Benjamin Harrison	23	Republican	Levi P. Morton	22	
27	1993	Grover Cleveland	24	Democrat	Adlai E. Stevenson I	23	
28	1897	William McKinley <sup>2</sup>	25	Republican	Garret Hobart <sup>1</sup>	24	
29	1901					Theodore Roosevelt <sup>1</sup>	25
	1901	Theodore Roosevelt	26			Charles W. Fairbanks	26
30	1905						
31	1909	William Howard Taft	27	Republican	James S. Sherman <sup>1</sup>	27	

Term	Year	President	Party	Vice President
32	1913	Woodrow Wilson 28	Democrat	Thomas R. Marshall 28
33	1917			
34	1921	Warren G. Harding <sup>1</sup> 29	Republican	Calvin Coolidge 29
	1923			
35	1925	Calvin Coolidge 30		Charles G. Dawes 30
36	1929	Herbert Hoover 31		Charles Curtis 31
37	1933	Franklin D. Roosevelt <sup>1</sup> 32	Democrat	John Nance Garner 32
38	1937			
39	1941			Harry A. Wallace 33
40	1945			Harry S. Truman 34
	1947			
41	1949	Harry S. Truman 33		Alben W. Barkley 35
42	1953	Dwight D. Eisenhower 34	Republican	Richard Nixon 36
43	1957			
44	1961	John F. Kennedy <sup>2</sup> 35	Democrat	Lyndon B. Johnson 37
	1963			
45	1965	Lyndon B. Johnson 36		Hubert Humphrey 38
46	1969	Richard Nixon <sup>3</sup> 37	Republican	Spiro Agnew <sup>3</sup> 39
	1973			Gerald Ford 40
47	1974	Gerald Ford 38		Nelson Rockefeller 41
48	1977	Jimmy Carter 39	Democrat	Walter Mondale 42
49	1981	Ronald Reagan 40	Republican	George H.W. Bush 43
50	1985			
51	1989	George H.W. Bush 41		Dan Quayle 44
52	1993	Bill Clinton 42	Democrat	Al Gore 45
53	1997			
54	2001	George W. Bush 43	Republican	Dick Cheney 46
55	2005			
56	2009	Barack Obama 44	Democrat	Joe Biden 47

<sup>1</sup> Died in office of natural causes

<sup>2</sup> Assassinated in office

<sup>3</sup> Resigned from office

## 2.7.5 Washington D.C. Embassy Rows<sup>1</sup>

Massachusetts Ave	
<b>Tunisia</b>	1515
<b>Philippines</b>	1600
<b>Australia</b>	1601
<b>Peru</b>	1700
<b>Trinidad and Tobago</b>	1708
<b>Chile</b>	1732
<b>Uzbekistan</b>	1746
<b>Papua New Guinea</b>	1779
<b>Indonesia</b>	2020
<b>India</b>	2107
<b>Estonia</b>	2131
<b>Luxembourg</b>	2200
<b>Turkmenistan</b>	2207
<b>Togo</b>	2208
<b>Sudan</b>	2210
<b>Bahamas</b>	2220
<b>Greece</b>	2221
<b>Ireland</b>	2234
<b>Haiti</b>	2311
<b>Pakistan</b>	2315
<b>Burkina Faso</b>	2340
<b>Croatia</b>	2343
<b>Cameroon</b>	2349
<b>Madagascar</b>	2374
<b>Paraguay</b>	2400
<b>Malaysia</b>	2401
<b>Malawi</b>	2408
<b>Zambia</b>	2419
<b>Ivory Coast</b>	2424
<b>Marshall Islands</b>	2433
<b>Korea</b>	2450
<b>Lesotho</b>	2511
<b>Japan</b>	2520
<b>Turkey</b>	2525
<b>Belize</b>	2535
<b>Brazil</b>	3006
<b>Bolivia</b>	3014
<b>South Africa</b>	3051
<b>United Kingdom</b>	3100
<b>Finland</b>	3301
<b>The Vatican</b>	3339
<b>Cape Verde</b>	3415

New Hampshire Ave	
<b>Jamaica</b>	1520
<b>Slovenia</b>	1525
<b>Botswana</b>	1531
<b>Argentina</b>	1600
<b>Namibia</b>	1605
<b>Zimbabwe</b>	1608
<b>Belarus</b>	1619
<b>Nicaragua</b>	1627
<b>Grenada</b>	1701
<b>Eritrea</b>	1708
<b>Rwanda</b>	1714
<b>Democratic Republic of Congo</b>	1800

<sup>1</sup> Embassies on other streets may be located at [www.embassy.org/embassies/](http://www.embassy.org/embassies/)

## 3 References and Resources

### 3.1 Puzzle Tools

- Decrypto ([www.blisstonia.com/software/WebDecrypto](http://www.blisstonia.com/software/WebDecrypto)): Effective cryptogram solver with heuristics. Available in a stand-alone download.
- Internet Anagram Server ([www.wordsmith.org/anagram](http://www.wordsmith.org/anagram)): Anagram engine. Lack of heuristics limits usefulness on multi-word anagrams.
- One Across ([www.oneacross.com](http://www.oneacross.com)): Crossword pattern solvers. Now supports levels of letter certainty
- Alphametic Puzzle Solver ([www.tkcs-collins.com/truman/alphamet/alpha\\_solve.shtml](http://www.tkcs-collins.com/truman/alphamet/alpha_solve.shtml)): Solves alphanumeric substitution math puzzles. Limited to addition.

### 3.2 Specialized Knowledge

- Internet Movie Database ([www.imdb.com](http://www.imdb.com)): Nearly complete listing of film and television productions, cast, and crew.