













 Contents

-   Characters
-   Units and Conversions
-   Graphics
-   English
-   Geography
-   Notes



 Contents  Characters[Character Converter](#)[Character Sets](#)[DOS Line Drawing Characters](#)[Codepages](#)[Windows Key Codes](#)[DOS Key Codes](#)[Font Information](#)  Units and Conversions  Graphics  English  Geography  Notes 

 **Contents**

[Characters](#)



[Units and Conversions](#)

[Units](#)

[Unit Conversions](#)

[Temperatures](#)

[Fractions](#)

[Roman Numerals](#)

[Resolution Converter](#)

[Calculator](#)

[Calendar](#)



[Graphics](#)



[English](#)



[Geography](#)



[Notes](#)





Contents



Characters



Units and Conversions



Graphics

Windows Colors

DOS Colors

Font Information

Pixels and Points

Screen Ruler

Paper Sizes



English































Geography











Notes



- +  **Contents**
- +  **Characters**
- +  **Units and Conversions**
- +  **Graphics**
- +  **English**
 - Words
 - The Elements of Style
- +  **Geography**
- +  **Notes**
- + 

-   **Contents**
-   **Characters**
-   **Units and Conversions**
-   **Graphics**
-   **English**
-   **Geography**
 -   **Countries**
 -   **States**
-   **Notes**
-  

-  [+ Contents](#)
-  [+ Characters](#)
-  [+ Units and Conversions](#)
-  [+ Graphics](#)
-  [+ English](#)
-  [+ Geography](#)
-  [+ Notes](#)
 - [Notes](#)
 - [Help Tips](#)
 - [Copyright](#)
-  [+ !\[\]\(8a5c092736ceaf7cfeed23b17ea5e6ff_img.jpg\)](#)

Character Converter

Dec	Hex	Oct	Binary	Chr	%	HTML	Name
0	00	00	00000000		0	.	Null
1	01	01	00000001	.	.	.	SOH - Start of heading
2	02	02	00000010	.	.	.	STX - Start of text
3	03	03	00000011	♥	.	.	ETX - End of text
4	04	04	00000100	♦	.	.	EOT - End of transmission
5	05	05	00000101	♣	2	.	ENQ - Inquire
6	06	06	00000110	♠	.	.	ACK - Acknowledge
7	07	07	00000111	•	.	.	Bell
8	08	10	00001000	.	3%	.	BS - Backspace
9	09	11	00001001	.	.	.	HT - Horizontal tab
10	0A	12	00001010	.	4%	.	LF - Line feed
11	0B	13	00001011	.	.	.	VT - Vertical tab
12	0C	14	00001100	.	.	.	FF - Form feed
13	0D	15	00001101	.	5%	.	CR - Carriage return
14	0E	16	00001110	.	.	.	SO - shift out
15	0F	17	00001111	.	6%	.	SI - Shift in
16	10	20	00010000	.	.	.	DLE - Data link escape
17	11	21	00010001	.	.	.	DC1 - Device control 1, X-on
18	12	22	00010010	.	7%	.	DC2 - Device control 2
19	13	23	00010011	!!	.	.	DC3 - Device control 3
20	14	24	00010100	¶	8	.	DC4 - Device control 4
21	15	25	00010101	§	.	.	NAK - Negative acknowledgment
22	16	26	00010110	.	.	.	SYN - Synchronous idle
23	17	27	00010111	.	9	.	ETB - End of transmission block
24	18	30	00011000	.	.	.	CAN - Cancel
25	19	31	00011001	↓	10	.	EM - End of medium
26	1A	32	00011010	→	.	.	SUB - Substitute; End of file
27	1B	33	00011011	←	.	.	ESC - Escape
28	1C	34	00011100	.	11	.	FS - File separator
29	1D	35	00011101	↔	.	.	GS - Group separator
30	1E	36	00011110	.	.	.	RS - Record separator
31	1F	37	00011111	.	.	.	US - Unit separator
32	20	40	00100000	.	12.5	.	Space
33	21	41	00100001	!	13	.	Exclamation point, exclamation mark (bang)
34	22	42	00100010	"	.	"	Quotation mark (double quote)
35	23	43	00100011	#	.	.	Number sign (pound)
36	24	44	00100100	\$.	.	Dollar sign
37	25	45	00100101	%	.	.	Percent sign
38	26	46	00100110	&	15	&	Ampersand
39	27	47	00100111	'	.	.	Apostrophe (single quote)
40	28	50	00101000	(.	.	Left parenthesis
41	29	51	00101001)	16	.	Right parenthesis
42	2A	52	00101010	*	.	.	Asterisk (star; splat)
43	2B	53	00101011	+	17	.	Plus sign
44	2C	54	00101100	,	.	.	Comma
45	2D	55	00101101	-	17.5	.	Minus sign (dash; hyphen)
46	2E	56	00101110	.	18	.	Period (full stop; dot; point; radix point)
47	2F	57	00101111	/	.	.	Forward slash (virgule; solidus; stroke)
48	30	60	00110000	0	19	.	Digit Zero
49	31	61	00110001	1	.	.	Digit One
50	32	62	00110010	2	.	.	Digit Two
51	33	63	00110011	3	20	.	Digit Three

52	34	64	00110100	4	.	.	Digit Four
53	35	65	00110101	5	.	.	Digit Five
54	36	66	00110110	6	.	.	Digit Six
55	37	67	00110111	7	.	.	Digit Seven
56	38	70	00111000	8	22	.	Digit Eight
57	39	71	00111001	9	.	.	Digit Nine
58	3A	72	00111010	:	.	.	Colon
59	3B	73	00111011	;	.	.	Semicolon
60	3C	74	00111100	<	.	<	Less than sign (left angle bracket)
61	3D	75	00111101	=	24	.	Equal sign
62	3E	76	00111110	>	.	>	Greater than sign (right angle bracket)
63	3F	77	00111111	?	.	.	Question mark
64	40	100	01000000	@	25	.	At sign (commercial at)
65	41	101	01000001	A	.	.	Latin capital letter A
66	42	102	01000010	B	.	.	Latin capital letter B
67	43	103	01000011	C	.	.	Latin capital letter C
68	44	104	01000100	D	.	.	Latin capital letter D
69	45	105	01000101	E	.	.	Latin capital letter E
70	46	106	01000110	F	27.5	.	Latin capital letter F
71	47	107	01000111	G	.	.	Latin capital letter G
72	48	110	01001000	H	.	.	Latin capital letter H
73	49	111	01001001	I	.	.	Latin capital letter I
74	4A	112	01001010	J	.	.	Latin capital letter J
75	4B	113	01001011	K	.	.	Latin capital letter K
76	4C	114	01001100	L	.	.	Latin capital letter L
77	4D	115	01001101	M	30	.	Latin capital letter M
78	4E	116	01001110	N	.	.	Latin capital letter N
79	4F	117	01001111	O	.	.	Latin capital letter O
80	50	120	01010000	P	.	.	Latin capital letter P
81	51	121	01010001	Q	.	.	Latin capital letter Q
82	52	122	01010010	R	.	.	Latin capital letter R
83	53	123	01010011	S	32.5	.	Latin capital letter S
84	54	124	01010100	T	.	.	Latin capital letter T
85	55	125	01010101	U	33.3	.	Latin capital letter U
86	56	126	01010110	V	.	.	Latin capital letter V
87	57	127	01010111	W	.	.	Latin capital letter W
88	58	130	01011000	X	.	.	Latin capital letter X
89	59	131	01011001	Y	35	.	Latin capital letter Y
90	5A	132	01011010	Z	.	.	Latin capital letter Z
91	5B	133	01011011	[.	.	Left square bracket
92	5C	134	01011100	\	.	.	Backslash (reverse solidus; back-slant)
93	5D	135	01011101]	.	.	Right square bracket
94	5E	136	01011110	^	.	.	Circumflex accent (caret)
95	5F	137	01011111	_	.	.	Underscore (horizontal bar; low line; under-bar)
96	60	140	01100000	´	37.5	.	Grave accent (acute accent; left single quote; back-quote)
97	61	141	01100001	a	.	.	Latin small letter A
98	62	142	01100010	b	.	.	Latin small letter B
99	63	143	01100011	c	.	.	Latin small letter C
100	64	144	01100100	d	.	.	Latin small letter D
101	65	145	01100101	e	.	.	Latin small letter E
102	66	146	01100110	f	40	.	Latin small letter F
103	67	147	01100111	g	.	.	Latin small letter G
104	68	150	01101000	h	.	.	Latin small letter H
105	69	151	01101001	i	.	.	Latin small letter I

106	6A	152	01101010	j	.	.	Latin small letter J
107	6B	153	01101011	k	.	.	Latin small letter K
108	6C	154	01101100	l	42.5	.	Latin small letter L
109	6D	155	01101101	m	.	.	Latin small letter M
110	6E	156	01101110	n	.	.	Latin small letter N
111	6F	157	01101111	o	.	.	Latin small letter O
112	70	160	01110000	p	.	.	Latin small letter P
113	71	161	01110001	q	.	.	Latin small letter Q
114	72	162	01110010	r	.	.	Latin small letter R
115	73	163	01110011	s	45	.	Latin small letter S
116	74	164	01110100	t	.	.	Latin small letter T
117	75	165	01110101	u	.	.	Latin small letter U
118	76	166	01110110	v	.	.	Latin small letter V
119	77	167	01110111	w	.	.	Latin small letter W
120	78	170	01111000	x	.	.	Latin small letter X
121	79	171	01111001	y	47.5	.	Latin small letter Y
122	7A	172	01111010	z	.	.	Latin small letter Z
123	7B	173	01111011	{	.	.	Left curly brace (left curly bracket)
124	7C	174	01111100		.	.	Vertical bar (OR symbol; vertical line; pipe)
125	7D	175	01111101	}	.	.	Right curly brace (right curly bracket)
126	7E	176	01111110	~	.	.	Tilde (approximate)
127	7F	177	01111111	.	.	.	Delete
<hr/>							
128	80	200	10000000	€	50	€	€ Euro currency symbol
129	81	201	10000001	□	.	.	Not used
130	82	202	10000010	,	.	.	Baseline single quote
131	83	203	10000011	f	.	ƒ	Latin small hooked f; florin
132	84	204	10000100	”	.	.	Baseline double quote
133	85	205	10000101	…	Ellipsis
134	86	206	10000110	†	52.5	†	Single dagger
135	87	207	10000111	‡	.	‡	Double dagger
136	88	210	10001000	^	.	.	Accent circumflex (caret); Euro symbol in
Codepage 1251							
137	89	211	10001001	‰	.	‰	Per mille
138	8A	212	10001010	Š	.	Š	Latin capital S with caron (hacek)
139	8B	213	10001011	‹	.	‘	Single left angle quote (single guillemet)
140	8C	214	10001100	Œ	55	Œ	Latin capital OE ligature
141	8D	215	10001101	□	.	.	Not used
142	8E	216	10001110	Ž	.	.	Not used
143	8F	217	10001111	□	.	.	Not used
144	90	220	10010000	□	.	.	Not used
145	91	221	10010001	‘	.	‘	Opening single quote
146	92	222	10010010	’	.	’	Closing single quote
147	93	223	10010011	“	.	“	Opening double quote
148	94	224	10010100	”	.	”	Closing double quote
149	95	225	10010101	•	.	•	Bullet
150	96	226	10010110	–	.	–	En-dash
151	97	227	10010111	—	.	—	Em-dash
152	98	230	10011000	˜	.	‾	Over-score (over line); tilde
153	99	231	10011001	™	60	™	Trademark
154	9A	232	10011010	š	.	š	Latin small S with caron (hacek)
155	9B	233	10011011	›	.	›	Single right angle quote (single quillemet)
156	9C	234	10011100	œ	.	œ	Latin small OE ligature
157	9D	235	10011101	□	.	.	Not used
158	9E	236	10011110	ž	.	.	Not used
159	9F	237	10011111	ÿ	62.5	Ÿ	Latin capital Y, diæresis/umlaut

160	A0	240	10100000	·	 	Non-breaking space
161	A1	241	10100001	¡	¡	Inverted exclamation mark
162	A2	242	10100010	¢	¢	Cent symbol
163	A3	243	10100011	£	£	Pound Sterling (pound sign)
164	A4	244	10100100	¤	¤	International Currency (currency sign)
165	A5	245	10100101	¥	¥	Japanese Yen (yen sign)
166	A6	246	10100110		65 ¦	Split (broken bar)
167	A7	247	10100111	§	§	Section sign
168	A8	250	10101000	¨	¨	Umlaut (diaeresis)
169	A9	251	10101001	©	©	Copyright sign
170	AA	252	10101010	^a	66.6 ª	Feminine ordinal indicator
171	AB	253	10101011	«	«	Left Guillemet (chevron; left angle quote)
172	AC	254	10101100	¬	¬	Not sign
173	AD	255	10101101	–	­	Soft hyphen
174	AE	256	10101110	®	®	Registered trademark
175	AF	257	10101111	¯	¯	Macron (over-score; vinculum)
176	B0	260	10110000	°	°	Degree sign
177	B1	261	10110001	±	±	Plus-Minus sign
178	B2	262	10110010	²	70 ²	Two Superscript
179	B3	263	10110011	³	³	Three Superscript
180	B4	264	10110100	´	´	Acute accent
181	B5	265	10110101	µ	µ	Micro sign
182	B6	266	10110110	¶	¶	Paragraph (Pilcrow sign)
183	B7	267	10110111	·	·	Middle dot
184	B8	270	10111000	¸	¸	Cedilla
185	B9	271	10111001	¹	¹	Superscript one
186	BA	272	10111010	º	º	Masculine ordinal indicator
187	BB	273	10111011	»	»	Right Guillemet (chevron, right angle quote)
188	BC	274	10111100	¼	¼	One-fourth
189	BD	275	10111101	½	½	One-half
190	BE	276	10111110	¾	¾	Three-fourths
191	BF	277	10111111	¿	75 ¿	Inverted question mark
192	C0	300	11000000	À	À	Latin capital A, grave accent
193	C1	301	11000001	Á	Á	Latin capital A, acute
194	C2	302	11000010	Â	Â	Latin capital A, circumflex
195	C3	303	11000011	Ã	Ã	Latin capital A, tilde
196	C4	304	11000100	Ä	Ä	Latin capital A, diæresis/umlaut
197	C5	305	11000101	Å	Å	Latin capital A, ring
198	C6	306	11000110	Æ	Æ	Latin capital AE ligature
199	C7	307	11000111	Ç	Ç	Latin capital C, cedilla
200	C8	310	11001000	È	È	Latin capital E, grave accent
201	C9	311	11001001	É	É	Latin capital E, acute accent
202	CA	312	11001010	Ê	Ê	Latin capital E, circumflex
203	CB	313	11001011	Ë	Ë	Latin capital E, diæresis/umlaut
204	CC	314	11001100	Ì	80 Ì	Latin capital I, grave accent
205	CD	315	11001101	Í	Í	Latin capital I, acute accent
206	CE	316	11001110	Î	Î	Latin capital I, circumflex
207	CF	317	11001111	Ï	Ï	Latin capital I, diæresis/umlaut
208	D0	320	11010000	Ð	Ð	Latin capital Eth, Icelandic
209	D1	321	11010001	Ñ	Ñ	Latin capital N, tilde
210	D2	322	11010010	Ò	Ò	Latin capital O, grave accent
211	D3	323	11010011	Ó	Ó	Latin capital O, acute accent
212	D4	324	11010100	Ô	Ô	Latin capital O, circumflex
213	D5	325	11010101	Õ	Õ	Latin capital O, tilde
214	D6	326	11010110	Ö	Ö	Latin capital O, diæresis/umlaut

215	D7	327	11010111	×	.	&times;	Multiplication sign
216	D8	330	11011000	Ø	.	&Oslash;	Latin capital O, slash
217	D9	331	11011001	Û	85	&Ugrave;	Latin capital U, grave accent
218	DA	332	11011010	Ú	.	&Uacute;	Latin capital U, acute accent
219	DB	333	11011011	Û	.	&Ucirc;	Latin capital U, circumflex
220	DC	334	11011100	Ü	.	&Uuml;	Latin capital U, diæresis/umlaut
221	DD	335	11011101	Ý	.	&Yacute;	Latin capital Y, acute accent
222	DE	336	11011110	Þ	.	&THORN;	Latin capital thorn, Icelandic
223	DF	337	11011111	ß	87.5	&szlig;	Latin small sharp s, German sz
224	E0	340	11100000	à	.	&agrave;	Latin small A, grave accent
225	E1	341	11100001	á	.	&aacute;	Latin small A, acute accent
226	E2	342	11100010	â	.	&acirc;	Latin small A, circumflex
227	E3	343	11100011	ã	.	&atilde;	Latin small A, tilde
228	E4	344	11100100	ä	.	&auml;	Latin small A, diæresis/umlaut
229	E5	345	11100101	å	90	&aring;	Latin small A, ring
230	E6	346	11100110	æ	.	&aelig;	Latin small AE ligature
231	E7	347	11100111	ç	.	&ccedil;	Latin small C, cedilla
232	E8	350	11101000	è	.	&egrave;	Latin small E, grave accent
233	E9	351	11101001	é	.	&eacute;	Latin small E, acute accent
234	EA	352	11101010	ê	.	&ecirc;	Latin small E, circumflex
235	EB	353	11101011	ë	.	&euml;	Latin small E, diæresis/umlaut
236	EC	354	11101100	ì	.	&igrave;	Latin small I, grave accent
237	ED	355	11101101	í	.	&iacute;	Latin small I, acute accent
238	EE	356	11101110	î	.	&icirc;	Latin small I, circumflex
239	EF	357	11101111	ï	.	&iuml;	Latin small I, diæresis/umlaut
240	F0	360	11110000	ð	.	&eth;	Latin small eth, Icelandic
241	F1	361	11110001	ñ	.	&ntilde;	Latin small N, tilde
242	F2	362	11110010	ò	95	&ograve;	Latin small O, grave accent
243	F3	363	11110011	ó	.	&oacute;	Latin small O, acute accent
244	F4	364	11110100	ô	.	&ocirc;	Latin small O, circumflex
245	F5	365	11110101	õ	.	&otilde;	Latin small O, tilde
246	F6	366	11110110	ö	.	&ouml;	Latin small O, diæresis/umlaut
247	F7	367	11110111	÷	.	&divide;	Division sign
248	F8	370	11111000	ø	.	&oslash;	Latin small O, slash
249	F9	371	11111001	ù	.	ugrave;	Latin small U, grave accent
250	FA	372	11111010	ú	.	&uacute;	Latin small U, acute accent
251	FB	373	11111011	û	.	&ucirc;	Latin small U, circumflex
252	FC	374	11111100	ü	.	&uuml;	Latin small U, diæresis/umlaut
253	FD	375	11111101	ý	.	&yacute;	Latin small Y, acute accent
254	FE	376	11111110	þ	.	&thorn;	Latin small thorn, Icelandic
255	FF	377	11111111	ÿ	100	&yuml;	Latin small Y, diæresis/umlaut





http://ourworld.compuserve.com/homepages/r_harvey

Character Sets

Dec	Hex	ANSI	CP437	CP850	Symbol	Wingdings
32	20					
33	21	!	!	!	!	!
34	22	"	"	"	∇	"
35	23	#	#	#	#	#
36	24	\$	\$	\$	∃	\$
37	25	%	%	%	%	%
38	26	&	&	&	&	&
39	27	'	'	'	∃	'
40	28	(((((
41	29)))))
42	2A	*	*	*	*	*
43	2B	+	+	+	+	+
44	2C	,	,	,	,	,
45	2D	-	-	-	-	-
46	2E
47	2F	/	/	/	/	/
48	30	0	0	0	0	0
49	31	1	1	1	1	1
50	32	2	2	2	2	2
51	33	3	3	3	3	3
52	34	4	4	4	4	4
53	35	5	5	5	5	5
54	36	6	6	6	6	6
55	37	7	7	7	7	7
56	38	8	8	8	8	8
57	39	9	9	9	9	9
58	3A	:	:	:	:	:
59	3B	;	;	;	;	;
60	3C	<	<	<	<	<
61	3D	=	=	=	=	=
62	3E	>	>	>	>	>
63	3F	?	?	?	?	?
64	40	@	@	@	≅	@
65	41	A	A	A	A	A
66	42	B	B	B	B	B
67	43	C	C	C	X	C
68	44	D	D	D	Δ	D
69	45	E	E	E	E	E
70	46	F	F	F	Φ	F
71	47	G	G	G	Γ	G
72	48	H	H	H	H	H

73	49	I	I	I	I	I
74	4A	J	J	J	ϑ	J
75	4B	K	K	K	K	K
76	4C	L	L	L	Λ	L
77	4D	M	M	M	M	M
78	4E	N	N	N	N	N
79	4F	O	O	O	O	O
80	50	P	P	P	Π	P
81	51	Q	Q	Q	Θ	Q
82	52	R	R	R	P	R
83	53	S	S	S	Σ	S
84	54	T	T	T	T	T
85	55	U	U	U	Υ	U
86	56	V	V	V	ς	V
87	57	W	W	W	Ω	W
88	58	X	X	X	Ξ	X
89	59	Y	Y	Y	Ψ	Y
90	5A	Z	Z	Z	Z	Z
91	5B	[[[[[
92	5C	\	\	\	∴	\
93	5D]]]]]
94	5E	^	^	^	⊥	^
95	5F	˘	˘	˘	=	˘
96	60					
97	61	a	a	a	α	a
98	62	b	b	b	β	b
99	63	c	c	c	χ	c
100	64	d	d	d	δ	d
101	65	e	e	e	ε	e
102	66	f	f	f	φ	f
103	67	g	g	g	γ	g
104	68	h	h	h	η	h
105	69	i	i	i	ι	i
106	6A	j	j	j	φ	j
107	6B	k	k	k	κ	k
108	6C	l	l	l	λ	l
109	6D	m	m	m	μ	m
110	6E	n	n	n	ν	n
111	6F	o	o	o	ο	o
112	70	p	p	p	π	p
113	71	q	q	q	θ	q
114	72	r	r	r	ρ	r
115	73	s	s	s	σ	s

116	74	t	t	t	τ	t
117	75	u	u	u	υ	u
118	76	v	v	v	ϑ	v
119	77	w	w	w	ω	w
120	78	x	x	x	ξ	x
121	79	y	y	y	ψ	y
122	7A	z	z	z	ς	z
123	7B	{	{	{	{	{
124	7C					
125	7D	}	}	}	}	}
126	7E	~	~	~	~	~
127	7F		Δ	Δ	•	
128	80	€	Ç	Ç	€	€
129	81	□	ü	ü	□	□
130	82	,	é	é	,	,
131	83	f	â	â	f	f
132	84	„	ä	ä	„	„
133	85	...	à	à
134	86	†	â	â	†	†
135	87	‡	ç	ç	‡	‡
136	88	^	ê	ê	^	^
137	89	‰	ë	ë	‰	‰
138	8A	Š	è	è	Š	Š
139	8B	<	ï	ï	<	<
140	8C	Œ	î	î	Œ	Œ
141	8D	□	ì	ì	□	□
142	8E	Ž	Ä	Ä	Ž	Ž
143	8F	□	Å	Å	□	□
144	90	□	É	É	□	□
145	91	‘	æ	æ	‘	‘
146	92	’	Æ	Æ	’	’
147	93	“	ô	ô	“	“
148	94	”	ö	ö	”	”
149	95	•	ò	ò	•	•
150	96	–	û	û	–	–
151	97	—	ù	ù	—	—
152	98	~	ÿ	ÿ	~	~
153	99	™	Ö	Ö	™	™
154	9A	š	Ü	Ü	š	š
155	9B	›	ø	ø	›	›
156	9C	œ	£	£	œ	œ
157	9D	□	¥	Ø	□	□
158	9E	ž	Pt	x	ž	ž

159	9F	ÿ	f	f	ÿ	ÿ
160	A0		á	á	€	
161	A1	ı	ı	ı	Ÿ	ı
162	A2	¢	ó	ó	'	¢
163	A3	£	ú	ú	≤	£
164	A4	¤	ñ	ñ	/	¤
165	A5	¥	Ñ	Ñ	∞	¥
166	A6		a	a	f	
167	A7	§	o	o	♣	§
168	A8	¨	ı	ı	♦	¨
169	A9	©		®	♥	©
170	AA	ª			♠	ª
171	AB	«	½	½	↔	«
172	AC	¬	¼	¼	←	¬
173	AD		ı	ı	→	
174	AE	®	«	«	↓	®
175	AF	¯	»	»	°	¯
176	B0	°			±	°
177	B1	±			²	±
178	B2	²			³	²
179	B3	³			×	³
180	B4	´		Á	∞	´
181	B5	μ		Â	∂	μ
182	B6	¶		Ã	•	¶
183	B7	·		Ä	÷	·
184	B8	,		Å	≠	,
185	B9	ı		©	≡	ı
186	BA	°			≈	°
187	BB	»			∴	»
188	BC	¼		¢		¼
189	BD	½		¥	—	½
190	BE	¾			⌊	¾
191	BF	ı			ℵ	ı
192	C0	À			ℶ	À
193	C1	Á			ℷ	Á
194	C2	Â			ℸ	Â
195	C3	Ã			∅	Ã
196	C4	Ä			⊗	Ä
197	C5	Å			⊕	Å
198	C6	Æ	ã	Ã	∅	Æ
199	C7	Ç	Ä	Ä	∩	Ç
200	C8	È			∪	È
201	C9	É			⊃	É
202	CA	Ê			⊃	Ê


203	CB	Ë			♀	Ë
204	CC	Ì			⊂	Ì
205	CD	Í			⊆	Í
206	CE	Î			∈	Î
207	CF	Ï		¤	∉	Ï
208	D0	Ð		ð	∠	Ð
209	D1	Ñ		Ð	∇	Ñ
210	D2	Ò		È	®	Ò
211	D3	Ó		È	©	Ó
212	D4	Ô		È	™	Ô
213	D5	Õ		'	∏	Õ
214	D6	Ö		í	√	Ö
215	D7	×		î	·	×
216	D8	Ø		ï	⊃	Ø
217	D9	Ù			^	Ù
218	DA	Ú			∨	Ú
219	DB	Û			↔	Û
220	DC	Ü			←	Ü
221	DD	Ý		:	↑	Ý
222	DE	Ɔ		ì	⇒	Ɔ
223	DF	Ɔ			↓	Ɔ
224	E0	à	α	Ó	◇	à
225	E1	á	β	Ò	<	á
226	E2	â	Γ	Ò	®	â
227	E3	ã	∏	Ò	©	ã
228	E4	ä	Σ	õ	™	ä
229	E5	å	σ	Ö	Σ	å
230	E6	æ	μ	μ	∫	æ
231	E7	ç		Ɔ		ç
232	E8	è	Φ	Ɔ		è
233	E9	é	Θ	Ú		é
234	EA	ê	Ω	Û		ê
235	EB	ë	δ	Ü		ë
236	EC	ì	∞	Ý		ì
237	ED	í	∅	Ý		í
238	EE	î	ε	–		î
239	EF	ï	∩	'		ï
240	F0	ð	≡	-	•	ð
241	F1	ñ	±	±	>	ñ
242	F2	ò	≥	=	∫	ò
243	F3	ó	≤	¼	∫	ó
244	F4	ô	∫	¶		ô
245	F5	õ	∫	§	∫	õ

246	F6	ö	÷	÷)	ö
247	F7	÷	≈	÷		÷
248	F8	ø	°	°)	ø
249	F9	ù	•	•		ù
250	FA	ú	·	·		ú
251	FB	û	√	1		û
252	FC	ü		3)	ü
253	FD	ý	2	2	}	ý
254	FE	þ)	þ
255	FF	ÿ			•	ÿ

You can enter these characters from the keyboard. Select the correct font in your application, then hold down the **ALT** key, then use the number pad: press and release 0 (zero), followed by the two- or three-digit decimal code for the character (in the Dec column in this table). Then release the **ALT** key.

Character codes highlighted in red may not be supported by Apple or UNIX computers. Character codes highlighted in blue may not be supported by word processors. Windows 3.x help cannot display the Wingdings font in help files. CP437 is Codepage 437 (United States), CP850 is Codepage 850 (Multilingual Latin 1); both are simulated using ANSI characters and pictures. Most fonts do not support characters 0-31.



  DOS Line Drawing Characters





Codepages

CP	ID	Character Set
037	.	EBCDIC
437	dos-437	MS-DOS, United States
500	.	EBCDIC "500V1"
708	.	Arabic (ASMO 708)
709	.	Arabic (ASMO 449+, BCON V4)
710	.	Arabic (Transparent Arabic)
720	dos-720	Arabic (DOS, Transparent AMSO)
737	.	MS-DOS Greek (was 437G)
775	.	MS-DOS Baltic
847	.	Thai
850	dos-850	Multi-lingual; Western Europe (Latin 1)
852	.	Slavic (Latin 2)
855	.	IBM Cyrillic (Russian)
857	.	Turkish (MS-DOS IBM Turkish)
860	.	Portuguese (MS-DOS Portuguese)
861	.	Icelandic (MS-DOS Icelandic)
862	dos-862	Hebrew (DOS)
863	.	Canadian-French (MS-DOS Canadian French)
864	.	Arabic
865	.	Nordic (MS-DOS Nordic)
866	.	Russian (MS-DOS Russian)
869	.	Modern Greek (IBM Greek)
874	Windows-874	Thai
875	.	EBCDIC
932	shift_jis	JIS/Japan (Shift-JIS)
936	gb2312	Chinese: Simplified characters – PRC and Singapore
949	ks_c_5601	Korean Extended Wansung
950	big5	Chinese: Traditional characters – Taiwan and Hong Kong
1026	.	EBCDIC
1200	.	Unicode (bitmap of ISO 10646)
1250	Windows-1250	Latin 2 East Europe / Central European
1251	Windows-1251	Cyrillic
1252	iso-8859-1	Latin 1
1253	Windows-1253	Greek
1254	Windows-1254	Turkish
1255	iso-8859-8	Hebrew (ISO-Logical or ISO-Visual)
1256	Windows-1256	Arabic (Windows)
1257	Windows-1257	Windows Baltic
1258	Windows-1258	Vietnamese
1361	.	Korean Johab
10000	.	Macintosh Roman

10001	.	Macintosh Japanese
10006	.	Macintosh Greek I
10007	.	Macintosh Cyrillic
10029	.	Macintosh Latin II
10079	.	Macintosh Icelandic
10081	.	Macintosh Turkish
20866	koi8-r	Cyrillic
28585	iso_8859-5	Cyrillic (ISO)
28592	iso-8859-2	Central European
28594	iso-8869-4	Baltic (ISO)
28597	iso-8859-7	Greek (ISO)
28599	iso-8859-9	Turkish (ISO)
50220	iso-2022-jp	Japanese (JIS)
50225	ISO-2022-KR	Korean (ISO)
51932	x-euc-jp	Japanese (EUC)
52936	HZ-GB-2312	Simplified Chinese
65000	UTF-7	Unicode UTF-7
65001	UTF-8	Unicode UTF-8

Codepage and Languages

437	dos-437	Dutch (Belgian), Dutch (standard), English (US), English (Australian), English (British), English (Irish), English (New Zealand), Finnish, French (Belgian), French (standard), French (Swiss), German (Austrian), German (standard), German (Swiss), Italian (standard), Spanish (Mexican), Spanish (modern sort), Spanish (traditional sort)
850	dos-850	Danish, Dutch (Belgian), Dutch (standard), , English (US), English (Australian), English (British), English (Canadian), English (Irish), English (New Zealand), Finnish, French (Belgian), French (Canadian), French (standard), French (Swiss), German (Austrian), German (standard), German (Swiss), Icelandic, Italian (standard), Norwegian (Bokmal), Portuguese (Brazilian), Portuguese (standard), Spanish (Mexican), Spanish (modern sort), Spanish (traditional sort), Swedish
852	.	Croatian, Czech, Hungarian, Polish, Romanian, Slovak, Slovenian, Turkish
855	.	Bulgarian, Czech, Russian
857	.	Turkish
860	.	Portuguese (Brazilian), Portuguese (standard)
861	.	Icelandic
863	.	English (Canadian), French (Canadian)
865	.	Danish, Norwegian (Bokmal), Swedish
866	.	Bulgarian, Russian
869	.	Greek



Windows Key Codes

Constant name	Value	Keyboard equivalent
VK_LBUTTON	01H	Left mouse button or touch screen
VK_RBUTTON	02H	Right mouse button
VK_CANCEL	03H	Used for CTRL + BREAK processing
VK_MBUTTON	04H	Middle mouse button (three-button mouse)
.	05H	Undefined
.	06H	Undefined
.	07H	Undefined
VK_BACK	08H	BACKSPACE key
VK_TAB	09H	TAB key
.	0AH	Undefined
.	0BH	Undefined
VK_CLEAR	0CH	CLEAR key
VK_RETURN	0DH	ENTER key
.	0EH	Undefined
.	0FH	Undefined
VK_SHIFT	10H	SHIFT key
VK_CONTROL	11H	CTRL key
VK_MENU	12H	ALT key
VK_PAUSE	13H	PAUSE key
VK_CAPITAL	14H	CAPS LOCK key
.	15H	Reserved for Kanji
.	16H	Reserved for Kanji
.	17H	Reserved for Kanji
.	18H	Reserved for Kanji
.	19H	Reserved for Kanji
.	1AH	Undefined
VK_ESCAPE	1BH	ESC key
.	1CH	Reserved for Kanji
.	1DH	Reserved for Kanji
.	1EH	Reserved for Kanji
.	1FH	Reserved for Kanji
VK_SPACE	20H	SPACEBAR
VK_PRIOR	21H	PAGE UP key
VK_NEXT	22H	PAGE DOWN key
VK_END	23H	END key
VK_HOME	24H	HOME key
VK_LEFT	25H	LEFT ARROW key
VK_UP	26H	UP ARROW key
VK_RIGHT	27H	RIGHT ARROW key
VK_DOWN	28H	DOWN ARROW key
VK_SELECT	29H	SELECT key
VK_PRINT	2AH	(OEM specific)
VK_EXECUTE	2BH	EXECUTE key
VK_SNAPSHOT	2CH	PRINT SCREEN
VK_INSERT	2DH	INS key
VK_DELETE	2EH	DEL key
VK_HELP	2FH	HELP key
VK_0	30H	Top row 0 key

VK_1	31H	Top row 1 key
VK_2	32H	Top row 2 key
VK_3	33H	Top row 3 key
VK_4	34H	Top row 4 key
VK_5	35H	Top row 5 key
VK_6	36H	Top row 6 key
VK_7	37H	Top row 7 key
VK_8	38H	Top row 8 key
VK_9	39H	Top row 9 key
.	3AH	Undefined
.	3BH	Undefined
.	3CH	Undefined
.	3DH	Undefined
.	3EH	Undefined
.	3FH	Undefined
.	40H	Undefined
VK_A	41H	A key
VK_B	42H	B key
VK_C	43H	C key
VK_D	44H	D key
VK_E	45H	E key
VK_F	46H	F key
VK_G	47H	G key
VK_H	48H	H key
VK_I	49H	I key
VK_J	4AH	J key
VK_K	4BH	K key
VK_L	4CH	L key
VK_M	4DH	M key
VK_N	4EH	N key
VK_O	4FH	O key
VK_P	50H	P key
VK_Q	51H	Q key
VK_R	52H	R key
VK_S	53H	S key
VK_T	54H	T key
VK_U	55H	U key
VK_V	56H	V key
VK_W	57H	W key
VK_X	58H	X key
VK_Y	59H	Y key
VK_Z	5AH	Z key
VK_LWIN	5BH	Left Windows key Applications key; Microsoft Natural Keyboard or Windows CE
VK_RWIN	5CH	Right Windows key Applications key; Microsoft Natural Keyboard or Windows CE
VK_APPS	5DH	Applications key; Microsoft Natural Keyboard or Windows CE
.	5EH	Undefined
.	5FH	Undefined
VK_NUMPAD0	60H	Keypad 0

VK_NUMPAD1	61H	Keypad 1
VK_NUMPAD2	62H	Keypad 2
VK_NUMPAD3	63H	Keypad 3
VK_NUMPAD4	64H	Keypad 4
VK_NUMPAD5	65H	Keypad 5
VK_NUMPAD6	66H	Keypad 6
VK_NUMPAD7	67H	Keypad 7
VK_NUMPAD8	68H	Keypad 8
VK_NUMPAD9	69H	Keypad 9
VK_MULTIPLY	6AH	Multiply key (asterisk *)
VK_ADD	6BH	Add key (plus sign +)
VK_SEPARATOR	6CH	Separator key
VK_SUBTRACT	6DH	Subtract key (minus sign -)
VK_DECIMAL	6EH	Decimal key (period .)
VK_DIVIDE	6FH	Divide key (slash /)
VK_F1	70H	F1 function key
VK_F2	71H	F2 function key
VK_F3	72H	F3 function key
VK_F4	73H	F4 function key
VK_F5	74H	F5 function key
VK_F6	75H	F6 function key
VK_F7	76H	F7 function key
VK_F8	77H	F8 function key
VK_F9	78H	F9 function key
VK_F10	79H	F10 function key
VK_F11	7AH	F11 function key
VK_F12	7BH	F12 function key
VK_F13	7CH	F13 function key
VK_F14	7DH	F14 function key
VK_F15	7EH	F15 function key
VK_F16	7FH	F16 function key
VK_F17	80H	F17 function key
VK_F18	81H	F18 function key
VK_F19	82H	F19 function key
VK_F20	83H	F20 function key
VK_F21	84H	F21 function key
VK_F22	85H	F22 function key
VK_F23	86H	F23 function key
VK_F24	87H	F24 function key
.	88H	Unassigned
.	89H	Unassigned
.	8AH	Unassigned
.	8BH	Unassigned
.	8CH	Unassigned
.	8DH	Unassigned
.	8EH	Unassigned
.	8FH	Unassigned
VK_NUMLOCK	90H	NUM LOCK key
VK_SCROLL	91H	SCROLL LOCK key
.	92-B9H	Unassigned

.	BA-BFH	OEM specific
VK_LSHIFT	A0H	Windows CE
VK_RSHIFT	A1H	Windows CE
VK_LCONTROL	A2H	Windows CE
VK_RCONTROL	A3H	Windows CE
VK_LMENU	A4H	Windows CE
VK_RMENU	A5H	Windows CE
.	A6-C0H	OEM specific
.	C1-DAH	Unassigned
.	DB-E4H	OEM specific
.	E5H	Unassigned
.	E6H	OEM specific
.	E7H	Unassigned
.	E8H	Unassigned
.	E9-F5H	OEM specific
VK_ATTN	F6H	ATTN key; Windows CE
VK_CRSEL	F7H	CRSEL key Windows CE
VK_EXSEL	F8H	EXSEL key; Windows CE
VK_EREOF	F9H	Erase EOF key; Windows CE
VK_PLAY	FAH	Play key; Windows CE
VK_ZOOM	FBH	Zoom key; Windows CE
VK_NONAME	FCH	Reserved; Windows CE
VK_PA1	FDH	PA1 key; Windows CE
VK_EM_CLEAR	FEH	Clear key; Windows CE

This table shows Windows Virtual key codes. The columns are symbolic constant names (defined in WINDOWS.H), hexadecimal values, and keyboard names.






DOS Key Codes

Key	.	Shift	Ctrl	Alt	Char
a A	1E61	1E41	1E01	1E00	1E86
b B	3062	3042	3002	3000	30FE
c C	2E63	2E43	2E03	2E00	2E87
d D	2064	2044	2004	2000	20D0
e E	1265	1245	1205	1200	1291
f F	2166	2146	2106	2100	219F
g G	2267	2247	2207	2200	22CF
h H	2368	2348	2308	2300	23BE
i I	1769	1749	1709	1700	.
j J	246A	244A	240A	2400	2424
k K	256B	244B	250B	2500	25BD
l L	266C	264C	260C	2600	269C
m M	326D	324D	320D	3200	32E6
n N	316E	314E	310E	3100	31D5
o O	186F	184F	180F	1800	189B
p P	1970	1950	1910	1900	19E7
q Q	1071	1051	1011	1000	10A6
r R	1372	1352	1312	1300	.
s S	1F73	1F53	1F13	1F00	1FE1
t T	1474	1454	1414	1400	.
u U	1675	1655	1615	1600	.
v V	2F76	2F56	2F16	2F00	2FF5
w W	1177	1157	1117	1100	11A7
x X	2D78	2D58	2D18	2D00	2DF8
y Y	1579	1559	1519	1500	.
z Z	2C7A	2C5A	2C1A	2C00	2CF4
Esc	011B	011B	011B	0100	011B
0)	0B30	0B29	.	8100	0B30
1 !	0231	0221	.	7800	02AE
2 @	0332	0340	0300	7900	03AF
3 #	0433	.	0423	7A00	04A8
4 \$	0534	0524	.	7B00	0534
5 %	0635	0625	.	7C00	0635
6 ^	0736	075E	071E	7D00	0736
7 &	0837	0826	.	7E00	08AC
8 *	0938	092A	.	7F00	09AB
9 (0A39	0A28	.	8000	0AF3
- _	0C3D	0C5F	0C1F	8200	.
= +	0D3D	0D2B	.	8300	0DF2
BACK	0E08	0E08	0E7F	0E00	0E08
TAB	0F09	0F00	9400	A500	0F09
ENTER	1C0D	1C0D	1C0A	1C00	1C0D
ENTER§	E00D	E00D	E00A	A600	.
; :	273B	273A	.	2700	273A
' "	2827	2822	.	2800	2827
\	2B5C	2B7C	2B1C	2B00	2B5C

,<	332C	333C	.	3300	.
.>	342E	343E	.	3400	34FA
/?	352F	353F	.	3500	35F6
GRAY /	E02F	E02F	9500	A400	.
SPACE	3920	3920	3920	3920	3920
F1	3B00	5400	5E00	6800	DB00
F2	3C00	5500	5F00	6900	DC00
F3	3D00	5600	6000	6A00	DD00
F4	3E00	5700	6100	6B00	DE00
F5	3F00	5800	6200	6C00	DF00
F6	4000	5900	6300	6D00	E000
F7	4100	5A00	6400	6E00	E100
F8	4200	5B00	6500	6F00	E200
F9	4300	5C00	6600	7000	E300
F10	4400	5D00	6700	7100	E400
F11	5700	8700	8900	8B00	.
F12	5800	8800	8A00	8C00	.
HOME 7	4700	4737	7700	.	4700
HOME§	47E0	47E0	77E0	9700	.
UP 8	4800	4838	8D00	.	4800
UP§	48E0	48E0	8DE0	9800	.
PgUP 9	4900	4939	8400	.	4900
PgUP§	49E0	49E0	84E0	9900	.
GRAY -	4A2D	4A2D	8E00	4A00	4AF0
LEFT 4	4B00	4B34	7300	.	4B00
LEFT§	4B30	4BE0	73E0	9B00	.
CENTER 5	4C00	4C35	8F00	.	.
CENTER§	4C00	8FE0	4C00	9C00	.
RIGHT 6	4D00	4D36	7400	.	4D00
RIGHT§	4D00	4DE0	74E0	9D00	.
END 1	4F00	4F31	7500	.	4F00
END§	4FE0	4FE0	75E0	9FE0	.
DOWN 2	5000	5032	9100	.	5000
DOWN§	50E0	50E0	50E0	A000	.
PgDn 3	5100	5133	7600	.	5100
PgDn§	51E0	51E0	76E0	A100	.
INS 0	5200	5230	9200	.	5200
INS§	52E0	52E0	92E0	A2E0	.
DEL .	5300	532E	9300	.	5300
GRAY *	372A	.	9600	.	379E
GRAY =	0D3D	0D3D	.	8300	0DF2
MENU§	C800	C900	CA00	CB00	.

§ Combinations available with extended keyboard BIOS only. Char prefix key and Menu key available on Hewlett-Packard Palmtops.



 Font Information
Parts of a font

Font sizes, in points



Units

A B C D E F G H I J K L M N O P Q R S T U V W X Y

Absolute zero	-273 degrees Centigrade -459.4 degrees Fahrenheit
Acre	43,560 square feet 0.405 hectare
Angstrom (A)	0.00000004 inch 0.0001 micrometer exactly 0.000001 millimeter exactly 0.1 nanometer exactly 120 fathoms exactly
Are[s]	100 sq. meters 0.025 acre 119.599 square yards
Astronomical Unit (AU)	Mean distance from Earth to Sun 93 million miles
<hr/>	
Bale	500 lb. (approximately)
Balthazar	(champagne) 6 magnums
Barrel	31.5 gallons 7,276.5 cubic inches
Barrel	(petroleum) 42 gallons 9,702 cubic inches
Billion	1,000,000,000 (1E9) British: 1,000,000,000,000 (1E12)
Bit (b)	Binary digit
Board foot	144 cubic inches (12×12×1 inch)
Bolt	(cloth) 40 yards
Bushel	(dry) 4 pecks 32 dry quarts 2150.42 cubic inches 35.2383 liters 60 pounds of wheat 56 pounds of rye 56 pounds of corn 48 pounds of barley 32 pounds of oats
Byte (B)	8 bits (hardware-dependent; may be 6, 7 or 9 on some older computers) signed range: -128 to 127 unsigned range: 0 to 255
<hr/>	
Cable's length	720 ft. exactly 219 meters
Carat	200 milligrams 3.086 grains (troy)
Centigrade	(temperature)

	Degrees Centigrade = $(5 \div 9) \times (^{\circ} \text{ Fahrenheit} - 32)$
Centigram	0.01 gram exactly 0.154 grain
Centiliter	0.01 liter exactly 0.61 cubic inch 0.0176 UK pint 0.0182 dry US pint 0.021 liquid US pint
Centimeter (cm)	0.3937 inch 0.01 meter exactly
Chain (ch)	(Gunter or surveying) 66 feet exactly 20.1168 meters
Chain	(Engineer) 100 feet 30.48 meters exactly
Circle	(angular) 360 degrees 4 quadrants 21,600 minutes 1,296,000 seconds
Cubic Centimeter	0.000001 cubic meter 0.061 cubic inch
Cubic Decimeter	0.001 cubic meter 61.023 cubic inches
Cubic Inch	16.3871 cubic centimeters 0.0360 pounds of water
Cubic Foot	1,728 cubic inches 28316.8466 cubic centimeters 18.317 cubic decimeters
Cubic Meter	1.307 cubic yards 35.3147 cubic feet 61023.7441 cubic inches
Cubic yard	27 cubic feet 764554.8580 cubic centimeters 0.765 cubic meter
Cubit	(Biblical) 21.8 inches 38.2 cm
Currency	8 bytes Range: -922337203685477.5808 to 922337203685477.5807
Decagram	10 grams 0.353 oz.
Decigram	0.1 gram 1.543 grains
Decimeter (dm)	3.937 inches
Decaliter	10 liters exactly 0.35 cubic foot 1.14 pecks

Decameter (dam)	32.808 square feet 1 square hectometer 10 square meters exactly 2.471 acres
Decigram	0.1 gram exactly 1.543 grains
Deciliter	0.1 liter exactly 6.1 cubic inches 0.176 UK pint 0.182 US dry pint 0.21 US liquid pint
Decimeter	0.1 meter exactly 3.937 inches
Decillion	1,000,000,000,000,000,000,000,000,000,000 1E33
Degree	(Geography) 364,566.929 feet 69,047 miles (avg.) 111.123 kilometers (avg.)
Degree of latitude	68.708 miles at the equator 69.403 miles at the poles
Degree of longitude	69,171 miles at equator
Double precision	64 bits, 8 bytes 5.0×10E-324 to 1.7×10E308 negative: -1.79769313486232E308 to -4.94065645841247E-324 positive: 4.94065645841247E-324 to 1.79769313486232E308
Dozen	12
Dram	(Avoirdupois) 27.34375 grains
<hr/>	
e	2.7182818284590452353602874713526624977572470936999595749669676 2772
Earth	(planet) 7,900-7,926 miles diameter 91.4 to 94.6 million miles from Sun 365.25 day year
Exa- (E)	10 ¹⁸
Extended precision	80 bits, 10 bytes 3.4×10E-4932 to 1.1×10e4932
<hr/>	
Fahrenheit	(temperature) Degrees Fahrenheit = (9 ÷ 5 × ° Centigrade) + 32
Fathom	6 ft. exactly 1.8288 meters exactly
Fifth	(alcohol) 0.76706 liter 1.6 pints 0.8 quart
Firkin	(computer slang)

	0.25 barrel 10.5 gallons
Foot (ft)	0.3048 meters exactly 12 in. exactly
Fortnight	14 days 2 weeks
Furlong	660 feet 220 yards 1/8 mile
<hr/>	
Gallon	231 cubic inches 3.7854 liters 8.33 pounds of water
Giga- (G)	10 ⁹
Gigabit (Gb)	1,073,741,824 bits 134,217,728 bytes
Gigabyte (GB)	1,024 megabytes 1,073,741,824 bytes (10 ⁹)
Gill	(liquid) 4 fluid oz. 7.219 cubic inches 0.1183 liter
Grain	(Avoirdupois) 0.0648 gram
Gram	0.035 oz. 1 cubic centimeter of water at 4 degrees Centigrade
Gross	12 dozen 144
<hr/>	
Hand	(Horse height measurement, from ground to shoulders) 4 inches
Hectare	10,000 square meters 100 are[s] 2.471 acres
Hectogram	100 grams exactly 3.527 oz.
Hectoliter	100 liters exactly 3.53 cubic feet 2.84 bushels 1.057 liquid quarts
Hectometer	100 meters exactly 328.08 feet 1 square kilometer 0.386 square mile
Hogshead	2 barrels
Horsepower	746 watts
Hundredweight	100 pounds
<hr/>	
Inch (in)	2.54 centimeters exactly
Integer (short)	16 bits, 2 bytes signed range: -32768 to 32,767

Integer (long)	unsigned range: 0 to 65,535 32-bits, 4 bytes signed range: -2,147,483,648 to 2,147,483,647 unsigned range: 0 to 4,294,967,295
Jeroboam	(alcohol, brandy and champagne) 0.8 gallons 1.6 magnum
Jigger	(alcohol) 1.5 shot
Jupiter	(planet) 88,700 miles diameter 460.6 to 507 million miles from Sun 4331.8 day year
Kelvin	(temperature) Degrees Kelvin = ° Centigrade + 273.16
Kilo- (k)	10 ³
Kilobit (Kb)	1024 bits 128 bytes
Kilobyte (KB)	1024 bytes
Kilogram	1,000 grams exactly 2.20462 pounds
Kiloliter	1,000 liters exactly 1.31 cubic yards
Kilometer (km)	0.621 mile 3,281.5 feet 1,000 meters exactly
Kilowatt	(power) 1,000 watts
Kilowatt-hour	(power) 3,600,000 joules 3.6 megajoules
League (land)	3 survey miles exactly 4.828 kilometers
Light-year	5,878,000,000,000 mi. (approximately)
Link	(Gunter or surveying) 7.92 in. exactly 0.201 meter
Link	(Engineer) 1 foot 0.305 meter
Liter	61.02 cubic inch 0.908 quart 10 deciliters 1.76 UK pints 1.82 dry US pint 2.1 liquid US pint
Long integer	32 bits, 4 bytes signed range: -2,147,483,648 to 2,147,483,647 unsigned range: 0 to 4,294,967,295

Magnum	(liquid) 2/5 gallon (approximately)
Magnum	(alcohol) 2.49797 bottles of wine 2 quarts
Mars	(planet) 4,180 miles diameter 128.5–155 million miles from Sun 687 day year
Mega- (M)	10 ⁶
Megabit (Mb)	1,024 bits 131,072 bytes
Megabyte (MB)	1,024 kilobytes 1,048,576 bytes (10 ⁶)
Mercury	(planet) 3,031 miles diameter 28.6–43.4 million miles from Sun 88 day year
Meter (m)	39.37 inches 1.094 yards Length of the path light travels in a vacuum in 1/299792458 second.
Metric ton	1,000,000 grams exactly 1.102 short ton 2,204.623 pounds
Micrometer (mm)	μ (Greek letter mu) 0.001 millimeter exactly 0.00003937 inch
Micro-fortnight	(computer slang) 1/1000000 fortnight 1.2096 second.
Micro-year	(computer slang) 31.5576 seconds 0.526 minute
Mil	0.001 inch exactly 0.0254 millimeter exactly
Mile (MI)	(Statute or land) 1760 yards exactly 5,280 feet exactly 1.609.3440 kilometers
Milligram	0.001 gram exactly 0.015 grain
Milliliter (ml)	0.001 liter exactly 0.0610237 cubic inch 0.27 fluid dram 0.00176 UK pint 0.00182 dry US pint .0021 liquid US pint
Millimeter (mm)	0.03937 inch 0.001 meter exactly

Million	1,000,000 1E6
Minim	(liquid) 0.0038 cubic inch 0.0616 milliliter
Minute	(angular) 60 seconds 1/60 degree 1/5400 quadrant or right angle 1/21600 circle
Moon	2,160 miles diameter 27.322 days rotation around Earth
Nanometer (nm)	0.001 micrometer exactly 0.00000003937 inch
Nanosecond	1 billionth second 0.000000001 second
Nano-year	(computer slang) .0315576 seconds
Nautical Mile	6076.11549 feet 1.852 kilometers exactly 1.150779 survey miles
Nebuchadnezzar	(champagne) 8 magnums
Neptune	(planet) 30,600 miles diameter (approximately, no solid surface) 2760.4–2821.7 million miles from Sun 60188.3 day year
Nonillion	1,000,000,000,000,000,000,000,000,000,000 1E30
Octillion	1,000,000,000,000,000,000,000,000,000 1E27
Ohm	(electrical resistance) 1 ampere at 1 volt of pressure
Ounce	(Avoirdupois) 16 drams 28.359 grams
Ounce	(Fluid) 0.0078 gallon 0.0296 liter
Pace	30 inches 2.5 feet
Parsec	3.26 light years 19,200,000,000,000 miles (approximately)
Palm	3 inches
Peck	16 pints 0.25 bushel 537.605 cubic inches 8.809 liters 1 British dry quart

Peta- (P)	10^{15}
Pi	3.1415926535897932384626433832795028841971693993751058209749445923
Pica	(typography) 12 points
Pint	(liquid) 28.875 cubic inches 0.473176 liter 0.0625 peck
Pint	(alcohol) 16 shots 0.625 fifth
Pluto	(planet) 1,400 miles diameter 2,756.4–4,551.4 million miles from Sun 90466.8 day year
Point (pt)	(Typography) 0.013837 in. exactly 1/72 in. (approximately) 1/12 pica 0.351 millimeter
Pony	(alcohol) 0.5 jigger
Quadrant	(angular) 1/4 circle 90 degrees 5,400 minutes 324,000 seconds
Quad integer	64 bits, 8 bytes signed range: -9,223,372,036,854,775,808 to 9,223,372,036,854,775,807 unsigned range: 0 to 18,446,744,073,709,551,615
Quadrillion	1,000,000,000,000,000 1E15
Quart (qt)	2 pints 57.7500 cubic inches 0.946353 liter
Quart	(alcohol) 1.25 fifths 32 shots
Quintal	100,000 grams 220.46 pounds (avoirdupois)
Quintillion	1,000,000,000,000,000,000 1E18
Rehoboam Methuselah	(champagne) 3 magnums
Rod (rd)	(Pole, or perch) 16 1/2 feet exactly

	5.029 meters
Salmanazar	(champagne) 4 magnums
Saturn	(planet) 71,000 miles diameter 8,338.4–937.5 million miles from Sun 10,760 day year
Second	(angular) 1/60 minute 1/3600 degree 1/324000 quadrant 1/296000 circle
Septillion	1,000,000,000,000,000,000,000,000 1E24
Sextillion	1,000,000,000,000,000,000,000 1E21
Short integer	16 bits, 2 bytes signed range: -32768 to 32,767 unsigned range: 0 to 65,535
Shot	(alcohol) 0.6666 jigger 1 ounce
Single precision	32 bits, 4 bytes 1.5*10E-45 to 3.4*10E38 negative: -3.402823E38 to -1.401298E-45 positive: 1.401298E-45 to 3.402823E38
Span	6 inches
Square Centimeter	0.0001 square meter 0.155 square inch
Square decimeter	15.5 square inches
Square foot	144 square inches 929.03 square centimeters
Square inch	6.4516 square centimeters
Square Kilometer	1,000,000 square meters 100 hectares 0.3861 square mile 247.1 acres
Square Meter	100 square centimeters 1.196 square yards
Square Mile	640 acres 3,097,600 square yards 27,878,400 square feet 258.999 hectares
Square Yard	9 square feet 1,296 square inches 0.836 square meter
Sun	432449 miles diameter
Tera- (T)	10 ¹²

Thousand	1,000 1E3
Ton	2000 pounds
Tonne	(metric ton) 1000 kilograms 2204.62 pounds
Trillion	1,000,000,000,000
Twip	1/1440 inch
Uranus	(planet) 32,000 miles diameter 1669.3 to 1859.7 million miles from Sun 30684 day year
Venus	(planet) 7,519 miles diameter 66.8 to 67.7 million miles from Sun 224.7 day year
Watt	(power) 1 joule per second
Wine bottle	0.20016 gallon .07576778 liter 0.800633 quart
Yard (yd)	36 inches 3 feet 0.9144 meter exactly
Yotta- (Y)	10^{24}
Zeta- (Z)	10^{21}





Unit Conversions

To Convert From	Multiply by	To Convert To
acre	40.468564224	ares
acre	0.40468564224	hectares
acre	43,560	square feet
acre	0.0040468564224	square kilometers
acre	4,046.8564224	square meters
acre	0.00156250	square miles (statute)
acre	4,840	square yards
ares	100	square meters
ares	119.599	square yards
barrels, US beer	31	gallons
barrels, US beer	117.34777	liters
barrels, US petroleum	34.97	gallons (British)
barrels, US petroleum	42	gallons (US)
barrels, US petroleum	158.98729	liters
barrels, US proof spirits	40	gallons
barrels, US proof spirits	151.41647	liters
bushels (US)	0.9689	bushels (British)
bushels (US)	1.244456	cubic feet
bushels (US)	2,150.42	cubic inches
bushels (US)	0.03523907	cubic meters
bushels (US)	0.04609096	cubic yards
bushels (US)	3.523907	deciliters
bushels (US)	64	dry pints
bushels (US)	32	dry quarts
bushels (US)	4	pecks
cable	120	fathoms
cable	219.456	meters
cable	240	yards
carat	200	carat
centimeters	0.03280840	feet
centimeters	0.3937008	inches
centimeters	0.01	meters
centimeters	0.01093613	yards
centimeters, cubic	0.061023744	cubic inches
centimeters, square	0.00107639	square feet
centimeters, square	0.15500031	square inches
centimeters, square	0.0001	square meters
centimeters, square	0.000119599	square yards
chains, square surveyor's	4.04686	ares
chains, square surveyor's	4,356	square feet
chains, surveyor's	66	feet
chains, surveyor's	20.1168	meters
chains, surveyor's	4	rods
cords of wood	128	cubic feet

ords of wood	3.624556	cubic meters
ords of wood	4.7407	cubic yards
cups	8	liquid ounces (US)
cups	0.2365882	liters
degrees Celsius	$(n * 1.8) + 32$	degrees Fahrenheit
degrees Fahrenheit	$(n - 32) \div 1.8$	degrees Celsius
deciliter	0.2837759	bushels
deciliter	0.3531467	cubic feet
deciliter	610.2374	cubic inches
deciliter	18.16166	dry pints
deciliter	9.0808298	dry quarts
deciliter	10	liters
deciliter	1.135104	pecks
drams, avoirdupois	0.06255	avoirdupois ounce
drams, avoirdupois	27.344	grains
drams, avoirdupois	1.7718452	grams
drams, troy	60	grams
drams, troy	3.8879346	grams
drams, troy	3	scruples
drams, troy	0.125	drams, troy
drams, liquid (US)	0.226	cubic inches
drams, liquid (US)	1.041	liquid drams (British)
drams, liquid (US)	0.125	liquid ounces
drams, liquid (US)	3.69669	milliliters
drams, liquid (US)	60	minims
fathoms	6	feet
fathoms	1.8288	meters
feet	30.48	centimeters
feet	12	inches
feet	0.0003048	kilometers
feet	0.3048	meters
feet	0.00018939	statute miles
feet	0.3333333	yards
feet, cubic	0.80356395	bushels
feet, cubic	28.316847	cubic decimeters
feet, cubic	1,728	cubic inches
feet, cubic	0.028316846592	cubic meters
feet, cubic	0.03703704	cubic yards
feet, cubic	51.42809	dry pints
feet, cubic	25.71405	dry quarts
feet, cubic	7.480519	gallons
feet, cubic	239.3766	gills
feet, cubic	957.5065	liquid ounces
feet, cubic	59.84416	liquid pints
feet, cubic	29.92208	liquid quarts
feet, cubic	28.316846592	liters

feet, cubic	3.214256	pecks
feet, square	0.0000229568	acres
feet, square	929.0304	square centimeters
feet, square	9.290304	square decimeters
feet, square	144	square inches
feet, square	0.09290304	square meters
feet, square	0.1111111	square yards
furlongs	660	feet
furlongs	7,920	inches
furlongs	201.168	meters
furlongs	0.125	statute miles
furlongs	220	yards
gallons, liquid (US)	0.1336806	cubic feet
gallons, liquid (US)	231	cubic inches
gallons, liquid (US)	0.003785411784	cubic meters
gallons, liquid (US)	0.00495113	cubic yards
gallons, liquid (US)	32	gills (US)
gallons, liquid (US)	0.83267	liquid gallons (British)
gallons, liquid (US)	128	liquid ounces
gallons, liquid (US)	8	liquid pints
gallons, liquid (US)	4	liquid quarts
gallons, liquid (US)	3.785411784	liters
gallons, liquid (US)	3,785.411784	milliliters
gallons, liquid (US)	61,440	minims
gills (US)	11.8294	centiliters
gills (US)	0.004177517	cubic feet
gills (US)	7.21875	cubic inches
gills (US)	0.03125	gallons
gills (US)	0.83267	gills (British)
gills (US)	4	liquid ounces
gills (US)	0.25	liquid pints
gills (US)	0.125	liquid quarts
gills (US)	0.11829411825	liters
gills (US)	118.29411825	milliliters
gills (US)	118.29411825	milliliters
gills (US)	1,920	minims
grains	0.03657143	avoirdupois drams
grains	0.00228571	avoirdupois ounces
grains	0.00014286	avoirdupois pounds
grains	0.06479891	grams
grains	0.06479891	grams
grains	0.00006479891	kilograms
grains	64.798910	grains
grains	0.042	pennyweights
grains	0.05	scruples
grains	0.0166	troy drams

grains	0.00208333	troy ounces
grains	0.00017361	troy pounds
grains	0.56438339	avoirdupois drams
grams	0.035273961	avoirdupois ounces
grams	0.0022046226	avoirdupois pounds
grams	0.001	grains
grams	1,000	milligrams
grams	0.0321507466	troy ounces
grams	0.00267923	grams
hands (height of horse)	10.16	centimeters
hands (height of horse)	4	inches
hectares	2.4710538	acres
hectares	107,639.1	square feet
hectares	0.01	square kilometers
hectares	10,000	square meters
hectares	0.00386102	square miles
hectares	11,959.90	square yards
hundredweight, long	112	avoirdupois pounds
hundredweight, long	50.802345	kilograms
hundredweight, long	0.05	long tons
hundredweight, long	0.050802345	metric tons
hundredweight, long	0.056	short tons
hundredweight, short	100	avoirdupois pounds
hundredweight, short	45.359237	kilograms
hundredweight, short	0.04464286	long tons
hundredweight, short	0.045359237	metric tons
hundredweight, short	0.05	short tons
inches	2.54	centimeters
inches	0.08333333	feet
inches	0.0254	meters
inches	25.4	millimeters
inches	0.02777778	yards
inches, cubic	0.000465025	bushels
inches, cubic	16.387064	cubic centimeters
inches, cubic	0.0005787037	cubic feet
inches, cubic	0.000016387064	cubic meters
inches, cubic	0.00002143347	cubic yards
inches, cubic	0.0297616	dry pints
inches, cubic	0.014880	dry quarts
inches, cubic	0.0043290	gallons
inches, cubic	0.1385281	gills
inches, cubic	0.5541126	liquid ounces
inches, cubic	0.03463203	liquid pints
inches, cubic	0.01731602	liquid quarts
inches, cubic	0.016387064	liters
inches, cubic	16.387064	milliliters

inches, cubic	265.9740	inches, cubic
inches, cubic	0.00186010	pecks
inches, square	6.451600	square centimeters
inches, square	0.00694444	square feet
inches, square	0.00064516	square meters
inches, square	0.000771605	square yards
kilograms	564.3834	avoirdupois drams
kilograms	35.273962	avoirdupois ounces
kilograms	2.204622622	avoirdupois pounds
kilograms	15,432.36	grains
kilograms	1,000	grams
kilograms	0.0009842	long tons
kilograms	0.001	metric tons
kilograms	0.02204623	short hundredweight
kilograms	0.00110231	kilograms
kilograms	32.15075	troy ounces
kilograms	2.679229	troy pounds
kilometers	1,000	meters
kilometers	0.621371192	statute miles
kilometers, square	247.10538	acres
kilometers, square	100	hectares
kilometers, square	1,000,000	square meters
kilometers, square	0.38610216	statute miles
knots (nautical mi./hr)	1.852	kilometers/hour
knots (nautical mi./hr)	1.151	statute miles/hour
leagues, nautical	5.556	kilometers
leagues, nautical	3	nautical miles
leagues, statute	4.828032	kilometers
leagues, statute	3	statute miles
links, square surveyor's	62.7264	square inches
links, surveyor's	20.1168	centimeters
links, surveyor's	0.01	chains
links, surveyor's	7.92	inches
liters	0.02837759	liters
liters	0.03531467	cubic feet
liters	61.02374	cubic inches
liters	0.001	cubic meters
liters	0.00130795	cubic yards
liters	0.1	deciliters
liters	1.816166	dry pints
liters	0.90808298	dry quarts
liters	0.264172052	gallons
liters	8.453506	gills (US)
liters	33.81402	liquid ounces
liters	2.113376	liquid pints
liters	1.0566	liquid quarts882

liters	1,000	milliliters
liters	0.1135104	pecks
meters	100	centimeters
meters	3.280839895	feet
meters	39.370079	inches
meters	0.001	kilometers
meters	1,000	millimeters
meters	0.000621371	statute miles
meters	1.093613298	yards
meters, cubic	28.37759	bushels
meters, cubic	35.3146667	cubic feet
meters, cubic	61,023.744	cubic inches
meters, cubic	1.307950619	cubic yards
meters, cubic	264.17205	gallons
meters, cubic	1,000	liters
meters, cubic	113.5104	pecks
meters, square	0.00024710538	acres
meters, square	0.0001	hectares
meters, square	10,000	square centimeters
meters, square	10.7639104	square feet
meters, square	1,550.0031	square inches
meters, square	1.195 990046	square yards
microns	0.000001	meters
microns	0.0000394	inches
mils	0.001	inches
mils	0.0254	millimeters
mils	0.0254	millimeters
miles, nautical	1.8520	kilometers
miles, nautical	1.1507794	statute miles
miles, statute	160,934.4	centimeters
miles, statute	5,280	feet
miles, statute	8	furlongs
miles, statute	63,360	inches
miles, statute	1.609344	kilometers
miles, statute	1,609.344	meters
miles, statute	320	rods
miles, statute	1,760	yards
miles, square nautical	3.429904	square kilometers
miles, square nautical	1.325	square statute miles
miles, square statute	640	acres
miles, square statute	258.9988110336	hectares
miles, square statute	1	sections
miles, square statute	2.589988110336	square kilometers
miles, square statute	0.755 miles	square nautical miles
miles, square statute	102,400	square rods
milligrams	0.01543235835	grains

milliliters	0.061023744	cubic inches
milliliters	0.00026417	gallons
milliliters	0.0084535	gills (US)
milliliters	0.03381402	milliliters
milliliters	0.0021134	liquid pints
milliliters	0.0010567	liquid quarts
milliliters	0.001	liters
milliliters	16.23073	minims
millimeters	0.0393700787	inches
minims (US)	0.00375977	cubic inches
minims (US)	0.00052083	gills (US)
minims (US)	0.00208333	liquid ounces
minims (US)	0.06161152	milliliters
minims (US)	1.041	minims (British)
ounces, avoirdupois	16	avoirdupois drams
ounces, avoirdupois	0.0625	avoirdupois pounds
ounces, avoirdupois	437.5	grains
ounces, avoirdupois	28.349523125	grams
ounces, avoirdupois	0.028349523125	kilograms
ounces, avoirdupois	0.9114583	troy ounces
ounces, avoirdupois	0.07595486	troy pounds
ounces, avoirdupois	0.00104438	cubic feet
ounces, liquid (US)	2.95735	centiliters
ounces, liquid (US)	1.8046875	cubic inches
ounces, liquid (US)	0.0078125	gallons
ounces, liquid (US)	8	liquid drams
ounces, liquid (US)	1.041	liquid ounces (British)
ounces, liquid (US)	0.0625	liquid pints
ounces, liquid (US)	0.03125	liquid quarts
ounces, liquid (US)	0.02957353	liters
ounces, liquid (US)	29.5735296	milliliters
ounces, liquid (US)	480	minims
ounces, troy	17.55429	avoirdupois drams
ounces, troy	1.097143	avoirdupois ounces
ounces, troy	0.06857143	avoirdupois pounds
ounces, troy	480	grains
ounces, troy	31.1034768	grams
ounces, troy	20	pennyweights
ounces, troy	8	troy drams
ounces, troy	0.0833333	troy pounds
paces (US)	76.2	centimeters
paces (US)	30	inches
pecks (US)	0.25	bushels
pecks (US)	0.311114	cubic feet
pecks (US)	537.60	cubic inches
pecks (US)	0.00880977	cubic meters

pecks (US)	0.01152274	cubic yards
pecks (US)	0.88097675	deciliters
pecks (US)	16	dry pints
pecks (US)	8	dry quarts
pecks (US)	8.8097675	liters
pecks (US)	0.9689	pecks (British)
pennyweights	24	grains
pennyweights	1.55517384	grams
pennyweights	0.05	troy ounces
pints, dry (US)	0.015625	bushels
pints, dry (US)	0.0194446	cubic feet
pints, dry (US)	33.6003125	cubic inches
pints, dry (US)	0.05506105	deciliters
pints, dry (US)	0.9689	dry pints (British)
pints, dry (US)	0.5	dry quarts
pints, dry (US)	0.55061047	liters
pints, liquid (US)	0.01671007	cubic feet
pints, liquid (US)	28.875	cubic inches
pints, liquid (US)	4.73176	deciliters
pints, liquid (US)	0.125	gallons
pints, liquid (US)	0.125	gallons
pints, liquid (US)	4	gills (US)
pints, liquid (US)	16	liquid ounces
pints, liquid (US)	0.83267	pints, liquid (US)
pints, liquid (US)	0.5	liquid quarts
pints, liquid (US)	0.473176473	liters
pints, liquid (US)	473.176473	milliliters
pints, liquid (US)	7,680	minims
points (typographical)	0.013837	inches
points (typographical)	0.3514598	millimeters
pounds, avoirdupois	256	avoirdupois drams
pounds, avoirdupois	16	avoirdupois ounces
pounds, avoirdupois	7,000	grains
pounds, avoirdupois	453.59237	grams
pounds, avoirdupois	0.45359237	kilograms
pounds, avoirdupois	0.0004464286	long tons
pounds, avoirdupois	0.00045359237	metric tons
pounds, avoirdupois	0.00453592	quintals
pounds, avoirdupois	0.0005	short tons
pounds, avoirdupois	14.58333	troy ounces
pounds, avoirdupois	1.215278	troy pounds
pounds, troy	210.6514	avoirdupois drams
pounds, troy	13.16571	avoirdupois ounces
pounds, troy	0.8228571	avoirdupois pounds
pounds, troy	5,760	grains
pounds, troy	373.2417216	grams

pounds, troy	0.3732417216	kilograms
pounds, troy	240	pennyweights
pounds, troy	12	troy ounces
quarts, dry (US)	0.03125	bushels
quarts, dry (US)	0.03888925	cubic feet
quarts, dry (US)	67.200625	cubic inches
quarts, dry (US)	0.1101221	deciliters
quarts, dry (US)	2	dry pints
quarts, dry (US)	0.9689	dry quarts (British)
quarts, dry (US)	1.101221	liters
quarts, dry (US)	0.125	pecks
quarts, dry (US)	2	pints, dry (US)
quarts, liquid (US)	0.03342014	cubic feet
quarts, liquid (US)	57.75	cubic inches
quarts, liquid (US)	9.46353	deciliters
quarts, liquid (US)	0.25	gallons
quarts, liquid (US)	8	gills (US)
quarts, liquid (US)	32	liquid ounces
quarts, liquid (US)	2	liquid pints (US)
quarts, liquid (US)	0.83267	liquid quarts (British)
quarts, liquid (US)	0.946352946	liters
quarts, liquid (US)	946.352946	milliliters
quarts, liquid (US)	15,360	minims
quintals	220.46226	avoirdupois pounds
quintals	100	kilograms
quintals	0.1	metric tons
rods	16.5	feet
rods	5.0292	meters
rods	5.5	yards
rods, square	0.00625	acres
rods, square	25.29285	square meters
rods, square	30.25	square yards
scruples	20	grains
scruples	1.2959782	grams
scruples	0.333	troy drams
sections (US)	2.5899881	square kilometers
sections (US)	1	square statute miles
spans	22.86	centimeters
spans	9	inches
steres	1	cubic meters
steres	1.30795	cubic yards
tablespoons	14.78676	milliliters
tablespoons	3	teaspoons
teaspoons	4.928922	milliliters
teaspoons	0.333333	tablespoons
ton-miles, long	1.635169	metric ton-kilometers

ton-miles, short	1.459972	metric ton-kilometers
tons, gross register	100	cubic feet of permanently enclosed space
tons, gross register	2.8316847	cubic meters of permanently enclosed space
tons, long (deadweight)	35,840	avoirdupois ounces
tons, long (deadweight)	2,240	avoirdupois pounds
tons, long (deadweight)	1,016.0469098	kilograms
tons, long (deadweight)	20	long hundredweight
tons, long (deadweight)	1.0160469088	metric tons
tons, long (deadweight)	22.4	short hundredweight
tons, long (deadweight)	1.12	short tons
tons, metric	2,204.623	avoirdupois pounds
tons, metric	1,000	kilograms
tons, metric	0.9842065	long tons
tons, metric	0.9842065	long tons
tons, metric	10	quintals
tons, metric	22.04623	short hundredweight
tons, metric	1.1023113	short tons
tons, metric	32,150.75	troy ounces
tons, net register	100	cubic feet of permanently enclosed space for cargo and passengers
tons, net register	2.8316847	cubic meters of permanently enclosed space for cargo and passengers
tons, shipping	42	cubic feet of permanently enclosed cargo space
tons, shipping	1.189307574	cubic meters of permanently enclosed cargo space
tons, short	2,000	avoirdupois pounds
tons, short	907.18474	kilograms
tons, short	0.8928571	long tons
tons, short	0.90718474	metric tons
tons, short	20	short hundredweight
townships (US)	36	sections
townships (US)	93.239572	square kilometers
townships (US)	36	square statute miles
miles, square statute	640	acres
miles, square statute	258.9988110336	miles, square statute
miles, square statute	27,878,400	square feet
miles, square statute	2,589,988.110336	square meters
miles, square statute	3,097,600	square yards
yards	91.44	centimeters
yards	3	feet
yards	36	inches
yards	0.9144	meters
yards	0.00056818	miles
yards, cubic	21.696227	bushels
yards, cubic	27	cubic feet
yards, cubic	46,656	cubic inches
yards, cubic	0.764554857984	cubic meters
yards, cubic	201.9740	gallons

yards, cubic	764.554857984	liters
yards, cubic	86.78491	pecks
yards, square	0.0002066116	acres
yards, square	0.000083612736	hectares
yards, square	8,361.2736	square centimeters
yards, square	9	square feet
yards, square	1,296	square inches
yards, square	0.83612736	square meters
yards, square	0.0000003228306	square miles

Source: CIA World Facts Book, Appendix E.





Temperatures

Fahrenheit	Celsius
572	300
500	260
482	250
475	246.1111
450	232.2222
437	225
425	218.3333
400	204.4444
392	200
375	190.5555
350	176.6667
325	162.7778
300	148.8889
275	135
250	121.1111
248	120
230	110
212	100
200	93.3333
194	90
190	87.7778
180	82.2222
176	80
170	76.6667
160	71.1111
158	70
150	65.5555
140	60
130	54.4444
122	50
120	48.8889
115	46.1111
113	45
110	43.3333
105	40.5555
104	40
100	37.7778
98.6	37
95	35
90	32.2222
86	30
85	29.4444
80	26.6667
77	25
75	23.8889
72	22.2222
70	21.1111
68	20
65	18.3333
60	15.5555
59	15

Water boiling point

55	12.7778	
50	10	
41	5	
40	4.4444	
35	1.6666	
<hr/>		
32	0	Water freezing point
30	-1.1111	
25	-3.8889	
23	-5	
20	-6.6667	
15	-9.4444	
14	-10	
10	-12.2222	
5	-15	
0	-17.7778	
-4	-20	
-5	-20.5555	
-10	-23.3333	
-13	-25	
-15	-26.6667	
-20	-28.8889	
-22	-30	
-25	-31.6666	
-30	-34.4444	
-31	-35	
-35	-37.2222	
-40	-40	
-50	-45.5555	
-60	-51.1111	
-70	-56.6667	
-80	-62.2222	
-90	-67.7778	
-100	-73.3333	
-150	-101.1111	
-297	-182.7778	Oxygen boiling point
-328	-200	
-459.4	-273	Absolute zero

Convert Fahrenheit to Celsius:

```
PRINT "Celsius: "; ((Fahrenheit - 32) * 5) / 9
```

Convert Celsius to Fahrenheit:

```
PRINT "Fahrenheit: "; ((Celsius * 9) / 5) + 32
```



http://ourworld.compuserve.com/homepages/r_harvey

 Fractions

Decimal	8th	16th	32nd	64th	10th	
0.015625	.	.	.	1/64	.	
0.03125	.	.	1/32	2/64	.	
0.046875	.	.	.	3/64	.	
0.0625	.	1/16	2/32	4/64	.	
0.078125	.	.	.	5/64	.	
0.09375	.	.	3/32	6/64	.	
0.10	1/10	
0.109375	.	.	.	7/64	.	
0.125	1/8	2/16	4/32	8/64	.	
0.140625	.	.	.	9/64	.	
0.15625	.	.	5/32	10/64	.	
0.171875	.	.	.	11/64	.	
0.1875	.	3/16	6/32	12/64	.	
0.20	2/10	1/5
0.203125	.	.	.	13/64	.	
0.21875	.	.	7/32	14/64	.	
0.234375	.	.	.	15/64	.	
0.25	2/8	4/16	8/32	16/64	.	
0.265625	.	.	.	17/64	.	
0.28125	.	.	9/32	18/64	.	
0.296875	.	.	.	19/64	.	
0.30	3/10	
0.3125	.	5/16	10/32	20/64	.	
0.328125	.	.	.	21/64	.	
0.34375	.	.	11/32	22/64	.	
0.359375	.	.	.	23/64	.	
0.375	3/8	6/16	12/32	24/64	.	
0.390625	.	.	.	25/64	.	
0.40	4/10	2/5
0.40625	.	.	13/32	26/64	.	
0.421875	.	.	.	27/64	.	
0.4375	.	7/16	14/32	28/64	.	
0.453125	.	.	.	29/64	.	
0.46875	.	.	15/32	30/64	.	
0.484375	.	.	.	31/64	.	
0.50	4/8	8/16	16/32	32/64	5/10	
0.515625	.	.	.	33/64	.	
0.53125	.	.	17/32	34/64	.	
0.546875	.	.	.	35/64	.	
0.5625	.	9/16	18/32	36/64	.	
0.578125	.	.	.	37/64	.	

0.59375	.	.	19/32	38/64	.	
0.60	6/10	3/5
0.609375	.	.	.	39/64	.	
0.625	5/8	10/16	20/32	40/64	.	
0.640625	.	.	.	41/64	.	
0.65625	.	.	21/32	42/64	.	
0.671875	.	.	.	43/64	.	
0.6875	.	11/16	22/32	44/64	.	
0.70	7/10	
0.703125	.	.	.	45/64	.	
0.71875	.	.	23/32	46/64	.	
0.734375	.	.	.	47/64	.	
0.75	6/8	12/16	24/32	48/64	.	
0.765625	.	.	.	49/64	.	
0.78125	.	.	25/32	50/64	.	
0.796875	.	.	.	51/64	.	
0.80	8/10	4/5
0.8125	.	13/16	26/32	52/64	.	
0.828125	.	.	.	53/64	.	
0.84375	.	.	27/32	54/64	.	
0.859375	.	.	.	55/64	.	
0.875	7/8	14/16	28/32	56/64	.	
0.890625	.	.	.	57/64	.	
0.90	9/10	
0.90625	.	.	29/32	58/64	.	
0.921875	.	.	.	59/64	.	
0.9375	.	15/16	30/32	60/64	.	
0.953125	.	.	.	61/64	.	
0.96875	.	.	31/32	62/64	.	
0.984375	.	.	.	63/64	.	
1.0	8/8	16/16	32/32	64/64	10/10	5/5





Roman Numerals

Roman	Decimal
I	1
II	2
III	3
IV	4
V	5
VI	6
VII	7
VIII	8
IX	9
X	10
XI	11
XII	12
XIII	13
XIV	14
XV	15
XVI	16
XVII	17
XVIII	18
XIX	19
XX	20
XXX	30
XL	40
L	50
LX	60
LXX	70
LXXX	80
XC	90
C	100
CL	150
CC	200
CCC	300
CD	400
D	500
DC	600
DCC	700
DCCC	800
CM	900
M	1,000
MCMXX	1,920
MCMXXX	1,930
MCMXL	1,940

MCML	1,950
MCMLX	1,960
MCMLXX	1,970
MCMLXXX	1,980
MCMXC	1,990
MM	2,000
	5,000
	10,000
	50,000
	100,000
	500,000
	1,000,000



 Resolution Converter

Inch	MM	Point	Pica	Pixels 72dpi	Pixels 96dpi	Pixels 120dpi	Pixels 300dpi
0.0138	0.3515	1.000	0.08	1	1	2	4
0.0277	0.7029	2.000	0.16	2	3	3	8
0.0394	1.0000	2.845	0.24	3	4	5	12
0.0415	1.0544	3.000	0.25	3	4	5	12
0.0553	1.4058	4.000	0.33	4	6	7	17
0.0692	1.7573	5.000	0.4	5	7	8	21
0.0830	2.1088	6.000	0.5	6	8	10	25
0.0969	2.4602	7.000	0.58	7	9	12	29
0.1107	2.8117	8.000	0.66	8	10	13	33
0.1245	3.1631	9.000	0.75	9	12	15	37
0.1250	3.1750	9.034	0.75	9	12	15	37
0.1384	3.5146	10.000	0.83	10	13	17	41
0.1522	3.8661	11.000	0.91	11	15	18	46
0.1660	4.2175	12.000	1	12	16	20	50
0.1937	4.9204	14.000	1.2	14	19	23	58
0.1969	5.0000	14.226	1.2	14	19	24	59
0.2000	5.0800	14.454	1.2	14	20	24	60
0.2214	5.6234	16.000	1.33	16	21	27	66
0.2491	6.3263	18.000	1.49	18	24	30	75
0.2500	6.3500	18.067	1.5	18	24	30	75
0.2767	7.0292	20.000	1.66	20	27	33	83
0.3044	7.7321	22.000	1.8	22	29	37	91
0.3321	8.4350	24.000	2	24	32	40	100
0.3333	8.4667	24.090	2	24	32	40	100
0.3874	9.8409	28.000	2.3	28	37	46	116
0.3937	10.0000	28.453	2.4	28	38	47	118
0.4000	10.1600	28.453	2.4	28	38	47	118
0.4151	10.5438	30.000	2.5	30	40	50	125
0.4428	11.2467	32.000	2.7	32	43	53	133
0.4981	12.6526	36.000	3	36	48	60	149
0.5000	12.7000	36.135	3	36	48	60	150
0.6642	16.8701	48.000	4	48	64	80	199
0.6666	16.9334	48.180	4	48	64	80	200
0.7500	19.0500	54.203	4.5	54	72	90	225
0.8000	20.3200	57.816	4.8	56	79	96	240
0.8333	21.1667	60.225	5	60	80	100	250
0.8856	22.4934	64.000	5.3	64	85	106	266
0.9963	25.3051	72.000	5.9	72	96	120	299
1.0000	25.4001	72.270	6	72	96	120	300
1.3284	33.7401	96.000	8	96	128	159	399
1.5000	38.1001	108.405	9	108	144	180	450
1.9925	50.6102	144.000	12	143	191	239	598

2.0000	50.8001	144.540	12	144	192	240	600
2.5000	63.5000	180.675	15	180	240	300	750
3.0000	76.2000	216.810	18	216	288	360	900
3.5000	88.9000	252.945	21	252	336	420	1,050
3.9370	100.0000	284.528	23.6	283	378	472	1,181
4.0000	101.6002	289.080	24	288	394	480	1,200

Pica = 1/6 inch (0.166667)

Point = 0.013837 inch

Millimeter = 0.03937 inch



 Calculator

Hex	Bin	?000	0?00	00?0	000?
0	0000	0	0	0	0
1	0001	4096	256	16	1
2	0010	8192	512	32	2
3	0011	12288	768	48	3
4	0100	16384	1024	64	4
5	0101	20480	1280	80	5
6	0110	24576	1536	96	6
7	0111	28672	1792	112	7
8	1000	32768	2048	128	8
9	1001	36864	2304	144	9
A	1010	40960	2560	160	10
B	1011	45056	2816	176	11
C	1100	49152	3072	192	12
D	1101	53248	3328	208	13
E	1110	57344	3584	224	14
F	1111	61440	3840	240	15

Hexadecimal, Binary, Decimal calculator and converter.



Birthstone: Garnet
Flower: Carnation
French: Janvier
Spanish: Enero
German: Januar
Italian: Gennaio
Swedish: Januari

Birthstone: Amethyst
Flower: Violet
French: Fevrier
Spanish: Febrero
German: Februar
Italian: Febbraio
Swedish: Februari

Birthstone: Bloodstone or Aquamarine

Ancient Birthstone: Jasper

Flower: Daffodil

French: Mars

Spanish: Marzo

German: März

Italian: Marzo

Swedish: Mars

Birthstone: Diamond
Ancient Birthstone: Sapphire
Flower: Sweet Pea
French: Avril
Spanish: Abril
German: April
Italian: Aprile
Swedish: April

Birthstone: Emerald
Ancient Birthstone: Agate
Flower: Lilly of the Valley
French: Mai
Spanish: Mayo
German: Mai
Italian: Maggio
Swedish: Maj

Birthstone: Alexandrite, Moonstone, Pearl

Ancient Birthstone: Emerald

Flower: Rose

French: Juin

Spanish: Junio

German: Juni

Italian: Giugno

Swedish: Juni

Birthstone: Ruby
Ancient Birthstone: Onyx
Flower: Larkspur
French: Julliet (Juillet)
Spanish: Julio
German: Juli
Italian: Luglio
Swedish: Juli

Birthstone: Peridot or Sardonyx

Ancient Birthstone: Carnelian

Flower: Gladiolus

French: Août

Spanish: Agosto

German: August

Italian: Agosto

Swedish: Augusti

Birthstone: Sapphire
Ancient Birthstone: Chrysolite
Flower: Aster
French: Septembre
Spanish: Septiembre
German: September
Italian: Settembre
Swedish: September

Birthstone: Opal, Tourmaline
Ancient Birthstone: Aquamarine
Flower: Calendula
French: Octobre
Spanish: Octubre
German: Oktober
Italian: Ottobre
Swedish: Oktober

Birthstone: Topaz
Flower: Chrysanthemum
French: Novembre
Spanish: Noviembre
German: November
Italian: Novembre
Swedish: November

Birthstone: Turquoise, Zircon

Ancient Birthstone: Ruby

Flower: Narcissus

French: Décembre

Spanish: Diciembre

German: Dezember

Italian: Dicembre

Swedish: December

New Year's Day
Last Day of Kwanzaa

Nuzulul Qur'an (Islamic)

Epiphany (Christian, Spain)

Orthodox Christmas

Battle of New Orleans 1815, defeated British in War of 1812

Coming of Age Day (Christian)

Benjamin Franklin's Birthday 1706

Martin Luther King Jr. Day
Daniel Webster's Birthday 1782

Eidul Fiti (Islamic)

Australia Day (Australia)

Martin Luther King Jr. Birthday 1929
Franklin D. Roosevelt's Birthday 1882

Australia Day (Australia)
Triodon (Orthodox)

Freedom Day, 13th Amendment

Tu B'Shevat (Jewish)

Groundhog Day - If Punxsutawney Phil sees his shadow, 6 more weeks of winter.
Candlemas - Festival of Lights (Christian)

Constitution Day (Mexico)

Waitangi Day (New Zealand)

Boy Scout Day 1910

National Foundation Day (Japan)

Abraham Lincoln's Birthday

Valentine's Day

President's Day
Susan B. Anthony Day 1820
Family Day (Canada)

Mardi Gras, Shrove Tuesday
Chinese New Year - Year of the Hare

Ash Wednesday

George Washington's Birthday
Lent begins (Orthodox)

St. David's Day (Britain)

Purim (Jewish)

International Women's Day

Commonwealth Day (Canada)

Mothering Sunday (Britain, Ireland)

St. Patrick's Day

First Day of Spring

Benito Juarez' Birthday (Mexico)

Emancipation Day (Puerto Rico)

Prince Kahio Day (Hawaii)

Palm Sunday
Eidul Adha (Islamic)

Doctor's Day
Seward's Day - Purchase of Alaska in 1867

Transfer Day 1917 - Bought Virgin Islands from Denmark in 1917

Passover begins
April Fool's Day

Good Friday

Easter Sunday
Daylight savings begins at 2 A.M. (set clock ahead 1 hour)

Easter Monday (Christian)

Scottish Tartan Day

Buddha's Birthday (Japan, Korea)
Passover ends (Jewish)

Easter (Orthodox)

Yom Hashoah (Jewish)
Thomas Jefferson's Birthday 1743

Librarian Day

First of Muharram (Islamic)
Paul Revere's Ride 1775

Patriot's Day

John Muir Day
Secretaries Day

Earth Day
Daughters to Work Day
Israel Independence Day

St. George's Day (Britain)

Liberation Day (Italy)

Secretaries' Day

Greenery Day (Japan)

Arbor Day - Plant a tree, Bird Day

Labor Day, May Day (Britain, France, Germany, Italy)
Loyalty Day 1958
Lawyer's Day

Constitution Day (Japan)

National Teacher's Day
National Day (Japan)
Lag B'Omer (Jewish)

Cinco de Mayo (Mexico)
Children's Day (Japan)
May Day Bank Holiday (Britain, Ireland)

Ascension Day (Christian)
Nurse's Day

V-E Day (Victory in Europe) 1945
Armistice Day

Mother's Day

Jamestown Virginia Settled 1607

Armed Forces Day
Police Memorial Day

Victoria Day (Canada)

Armed Forces Day

Ascension Day (Christian, Orthodox)

Shavuot (Jewish)

Maritime Day 1819

The Day of Pentecost, Whit Sunday (Christian)
Memorial Day - Traditional

Victoria Day (Canada)

Memorial Day (observed on May 31)
Trinity Sunday (Christian)
Pentecost (Orthodox)

Memorial Day observed

D-Day

Queen's Birthday (Australia, Britain)

Kamehameha Day (Hawaii)

International Children's Day

Flag Day
Army Birthday

Juneteenth; African-American Emancipation Day

Father's Day

Battle of Little Big Horn MT 1876

Mawlid An-Nabi (Islamic)

Canada Day (Canada)

Independence Day

Bastille Day (France)
Orangeman's Day (N. Ireland)

Marine Day (Japan)

National Holiday (Japan)

Tisha B'Av (Jewish)

Parent's Day
Constitution Day (Puerto Rico)

Civic Holiday (Canada)
August Bank Holiday (Ireland)

August Bank Holiday (Ireland)

Friendship Day

Solar Total Eclipse: Europe, Middle East, India

World War II V-J Day 1945

Assumption Day (Christian)

Aviation Day
Orville Wright's Birthday 1871

Susan B. Anthony Day 1920

Summer Bank Holiday (Britain)

Cherokee National Holiday

Labor Day

Rosh Hashanah (Jewish)

Grandparent's Day

Respect for the Aged Day (Japan)

Mexican Independence Day
Cherokee Strip Day 1893 (Oklahoma)

Constitution Day
Citizenship Day

Oktoberfest begins, through October 5
Yom Kippur (Jewish)

Autumnal Equinox (23rd or 24th)

Native American Day

Sukkot begins (Jewish)

Confucius' Birthday
Teacher's Day (Taiwan)

Sukkot ends (Jewish)

Sh'mini Atzeret (Jewish)

National Day of Prayer
German National Day (Germany)
Simchat Torah (Jewish)

Fire Prevention Week
Chicago Fire Anniversary

Health-Sports Day (Japan)

Columbus Day observed
Thanksgiving Day (Canada)
Indigenous People's Day

Columbus Day
Hispanic Day (Spain)
Farmers' Day 1912

Sweetest Day
Boss's Day
World Food Day

World Hello Day - Say hello to 10 people

United Nations Day

Halloween (Ireland)
Mothers-in-law Day

Navy Day 1922

Halloween

Daylight savings ends at 2 A.M. (set clock back 1 hour)

All Saints Day (Christian)
Day of the Dead (Mexico)

All Souls Day (Christian)

Election Day

Culture Day (Japan)

Sadie Hawkin's Day

Veteran's Day
Armistice Day 1918

Shichi-Go-San 7-5-3 (Japan)

Repentance Day (Germany)

Great American Smoke-Out

Discovery Day (Puerto Rico) - Columbus landed in 1493

World Hello Day - Say hello to 10 people

Labor Thanksgiving Day (Japan)

National Holiday (Japan)

Thanksgiving Day

Buy Nothing Day

First Sunday of Advent (Christian)

St. Andrew's Day (Britain)

AIDS Awareness Day

Hanukkah (Jewish)

Constitution Day (Spain)

Pearl Harbor Day 1941

Day of The Immaculate Conception (Christian, Spain)

Nuzulul Qur'an (Islamic)

Human Rights Day

Chanukah ends (Jewish)

Guadalupe Day (Mexico)

St. Lucia Day (Sweden, Italy)

First Day of Winter

Emperor's Birthday (Japan)

Christmas Day
Nuzulul Qur'an (Islamic)

December 26- January 1 - Kwanzaa (Traditional African harvest festival)
Boxing Day (Canada)

Boxing Day (Britain, Italy, Spain)

Wounded Knee Massacre SD 1890

New Year's Eve

+  Calendar

Sun Mon Tue Wed Thu Fri Sat

 January 1999

.	<u>1</u>	2
3	4	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	9
10	11	12	13	14	<u>15</u>	16
<u>17</u>	<u>18</u>	<u>19</u>	20	21	22	23
24	25	<u>26</u>	27	28	29	<u>30</u>
31

 February 1999

.	<u>1</u>	<u>2</u>	3	4	<u>5</u>	<u>6</u>
7	<u>8</u>	9	10	<u>11</u>	<u>12</u>	13
<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	18	19	20
21	<u>22</u>	23	24	25	26	27
28

+  March 1999

.	<u>1</u>	<u>2</u>	3	4	5	6
7	<u>8</u>	9	10	11	12	<u>13</u>
<u>14</u>	15	16	<u>17</u>	18	19	<u>20</u>
<u>21</u>	<u>22</u>	23	24	25	<u>26</u>	27
<u>28</u>	29	<u>30</u>	<u>31</u>	.	.	.

+  April 1999

.	.	.	.	<u>1</u>	<u>2</u>	3
4	5	6	7	<u>8</u>	9	10
<u>11</u>	12	<u>13</u>	14	15	<u>16</u>	17
<u>18</u>	<u>19</u>	20	<u>21</u>	<u>22</u>	<u>23</u>	24
<u>25</u>	26	27	<u>28</u>	<u>29</u>	<u>30</u>	.

+  May 1999


.	<u>1</u>
2	3	4	5	6	7	8
9	10	11	12	<u>13</u>	14	<u>15</u>
16	17	<u>18</u>	19	<u>20</u>	<u>21</u>	<u>22</u>
<u>23</u>	<u>24</u>	25	26	27	28	29
30	<u>31</u>

+  June 1999

.	.	1	2	3	4	5
<u>6</u>	7	8	<u>9</u>	10	<u>11</u>	12
<u>13</u>	<u>14</u>	15	16	17	18	<u>19</u>
<u>20</u>	21	22	23	24	<u>25</u>	<u>26</u>
27	28	29	30	.	.	.

+  July 1999

.	.	.	.	<u>1</u>	2	3
<u>4</u>	5	6	7	8	9	10
11	12	13	<u>14</u>	15	16	17
18	19	<u>20</u>	<u>21</u>	<u>22</u>	23	24
<u>25</u>	26	27	28	29	30	31

+  August 1999

1	<u>2</u>	3	<u>4</u>	5	<u>6</u>	7
---	----------	---	----------	---	----------	---

8	9	10	<u>11</u>	12	13	<u>14</u>
<u>15</u>	16	17	18	<u>19</u>	20	21
22	<u>26</u>	24	25	26	27	28
29	<u>30</u>	31

☰  **September 1999**

.	.	.	1	2	3	4
5	<u>6</u>	7	8	9	10	<u>11</u>
<u>12</u>	<u>13</u>	14	<u>15</u>	<u>16</u>	<u>17</u>	18
19	<u>20</u>	21	22	<u>23</u>	<u>24</u>	<u>25</u>
26	27	<u>28</u>	29	30	.	.

☰  **October 1999**


.	<u>1</u>	<u>2</u>
<u>3</u>	4	5	6	7	<u>8</u>	9
<u>10</u>	<u>11</u>	<u>12</u>	13	14	15	<u>16</u>
17	18	19	20	<u>21</u>	22	23
<u>24</u>	<u>25</u>	26	<u>27</u>	28	29	30
31

☰  **November 1999**

.	<u>1</u>	<u>2</u>	<u>3</u>	4	5	<u>6</u>
7	8	9	10	<u>11</u>	12	13
14	<u>15</u>	<u>16</u>	17	<u>18</u>	<u>19</u>	20
<u>21</u>	22	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	27
<u>28</u>	29	<u>30</u>

☰  **December 1999**

.	.	.	<u>1</u>	2	3	<u>4</u>
5	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>
<u>12</u>	<u>13</u>	14	15	16	17	18
19	20	21	<u>22</u>	<u>23</u>	24	<u>25</u>
<u>26</u>	<u>27</u>	28	<u>29</u>	30	<u>31</u>	.

☰  **January 2000**

.	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

☰  **February 2000**

.	.	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	.	.	.	<i>leap year</i>

☰  **March 2000**

.	.	.	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	.

+	■	April 2000					
.	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	

+	■	May 2000					
.	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	.	.	.	

+	■	June 2000					
.	.	.	.	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	.	









+	■	July 2000					
.	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	

+	■	August 2000					
.	.	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	.	.	

+	■	September 2000					
.	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	

+	■	October 2000					
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	

+	■	November 2000					
.	.	.	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	.	.
<hr/>						
 December 2000						
.	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
<hr/>						
 January 2001						
.	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	.	.	.
<hr/>						
 February 2001						
.	.	.	.	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	.	.	.
<hr/>						
 March 2001						
.	.	.	.	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
<hr/>						
 April 2001						
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
<hr/>						
 May 2001						
.	.	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	.	.
<hr/>						
 June 2001						
.	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
<hr/>						
 July 2001						
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

 **August 2001**

.	.	.	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	.

 **September 2001**

.	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

 **October 2001**


.	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	.	.	.

 **November 2001**

.	.	.	.	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	.

 **December 2001**

.	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

 **January 2002**

.	.	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	.	.

 **February 2002**

.	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	28	28	.	.

 **March 2002**

.	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	28	28	29	30
31

+  April 2002

.	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

+  May 2002


.	.	.	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	.

+  June 2002


.	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

+  July 2002

.	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	.	.	.

+  August 2002

.	.	.	.	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

+  September 2002

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

+  October 2002

.	.	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	.	.

+		November 2002						
.	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		

+		December 2002						
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		

+		January 2003						
.	.	.	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	.		

+		February 2003						
.	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	.		

+		March 2003						
.	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		

+		April 2003						
.	.	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	.	.	.		

+		May 2003						
.	.	.	.	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		

+		June 2003						
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		

	July 2003						
.	.	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	.	.	

	August 2003						
.	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	

	September 2003						
.	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	

	October 2003						
.	.	.	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	.	

	November 2003						
.	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	

	December 2003						
.	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	.	.	.	



Windows Colors

Named colors are pure. Other colors look correct in all color modes, with smooth 2-color dithering in 16-color VGA. The final three colors are pure screen colors in 256-color modes, not for drawings. For Web-safe colors, see [HTMLcat](#).



  **DOS Colors**

I	R	G	B	Dec	Hex	Background	Foreground
0	0	0	0	0	0	Black	Black
0	0	0	1	1	1	Blue	Blue
0	0	1	0	2	2	Green	Green
0	0	1	1	3	3	Cyan	Cyan
0	1	0	0	4	4	Red	Red
0	1	0	1	5	5	Magenta	Magenta
0	1	1	0	6	6	Brown	Brown
0	1	1	1	7	7	White / lt. gray	White / lt. gray
1	0	0	0	8	8	Dark gray	Black blink
1	0	0	1	9	9	Light blue	Blue blink
1	0	1	0	10	A	Light green	Green blink
1	0	1	1	11	B	Light cyan	Cyan blink
1	1	0	0	12	C	Light red	Red blink
1	1	0	1	13	D	Light magenta	Magenta blink
1	1	1	0	14	E	Yellow	Brown blink
1	1	1	1	15	F	Bright white	White blink

I = Intensity bit, **R** = Red bit, **G** = Green bit, **B** = Blue bit



Cap-line | Cap-height

The top of a capital letter. Some symbols rise above the cap-height, which affects the point size of the font. The height of the font is the point size, plus spacing between lines.

Ascender

The part of a lowercase character that rises above the x-line. Characters with ascenders include b, d, f, h, k, l and t.

Arm

A horizontal stroke, such as the top bar in uppercase "T". Uppercase "E" has three arms.

Eye

The enclosed portion of the lowercase "e" character.

x-height | Mean Line

The height of a lowercase x character above the baseline. The relationship between the x-height and the top of the letter (cap-line) affects readability. At larger sizes, a low x-height is attractive. At small font sizes, a large x-height makes fonts more readable.

Stroke

A line drawn to form a font. We often refer to stroke thickness as the weight of the font.

x-line

Marks the x-height at the top of lowercase characters. The x-height is said to be at the top of the lowercase x character; some lowercase characters extend above this line.

Baseline

The horizontal line at the bottom of the font where the base of the text rests.

Counter

Enclosed segment of a character.

Bowl

The rounded segment of a character.

Loop | Tail

Descender portion of lowercase "g" character. The terminating stroke of uppercase "R" is often also called the Tail. The end of a stroke is often called the *terminal*.

Descender


The portion of a lowercase character that extends below the baseline.

Serif

Small strokes at the end of strokes on seriffed fonts. Fonts without serifs are called sans-serif. The end of a stroke is often called a Terminal.

Ear

A portion of lowercase "g" that extends above the baseline away from the character. Found in "g", but not "g".

 Pixels and Points
Line weights, in pixels

On-screen pixels

Dimensions are for VGA with small fonts.



Screen Ruler

Measurements are screen-dependent. The operating system may scale these vector drawings to approximate true measurements. VGA resolution (small-fonts) is usually considered to be 96 pixels per inch; 8514 resolution (large fonts) is approximately 120 pixels per inch.



 **Paper Sizes**

Metric		Inches		Paper type
Width	Height	Width	Height	
.	.	8.50	11.00	A (American)
.	.	11.00	17.00	B
.	.	17.00	22.00	C
.	.	22.00	34.00	D
.	.	34.00	44.00	E
104.7	241.3	4.125	9.50	Com 10
190.5	266.7	7.25	10.50	Executive
.	.	14.875	11.00	Fanfold
215.90	330.20	8.50	13.00	Folio
.	.	8.50	12.00	German standard fanfold
.	.	17.00	11.00	Ledger
215.9	355.6	8.50	14.00	Legal
.	.	9.50	15.00	Legal extra
215.90	279.40	8.50	11.00	Letter
.	.	9.50	12.00	Letter extra
.	.	8.50	12.66	Letter plus
98.4	190.5	3.875	7.50	Monarch
215	275	.	.	Quarto
.	.	5.50	8.50	Statement
.	.	11.00	17.00	Tabloid
.	.	11.66	18.00	Tabloid extra
841	1189	.	.	A0
594	841	.	.	A1
420	594	.	.	A2
297	420	.	.	A3
322	445	.	.	A3 extra
210	297	.	.	A4
236	322	.	.	A4 extra
210	330	.	.	A4 plus
210	297	.	.	A4 small
148	210	.	.	A5
174	235	.	.	A5 extra
105	148	.	.	A6
74	105	.	.	A7
52	74	.	.	A8
37	52	.	.	A9
26	37	.	.	A10
18	26	.	.	A11
13	18	.	.	A12
99	210	.	.	1/3 A4
74	210	.	.	1/4 A4
13	74	.	.	1/8 A4

1000	1414	.	.	B0
707	1000	.	.	B1
500	707	.	.	B2
353	500	.	.	B3
250	353	.	.	B4
176	250	.	.	B5
201	276	.	.	B5 extra
125	176	.	.	B6
88	125	.	.	B7
62	88	.	.	B8
44	62	.	.	B9
31	44	.	.	B10
162	229	.	.	C5
200	210	.	.	1/6 Deutsche Industrie Norm
<hr/>				
74	105	.	.	A7 envelope
74	148	.	.	A7/A6 envelope
250	353	.	.	B4 envelope
176	250	.	.	B5 envelope
125	176	.	.	B6 envelope
125	229	.	.	B6/C4 envelope
136	353	.	.	1/2 B4 envelope
484	324	.	.	C3 envelope
229	324	.	.	C4 envelope
162	229	.	.	C5 envelope
114	162	.	.	C6 envelope
114	229	.	.	C65 envelope
81	114	.	.	C7 envelope
81	162	.	.	C7/C6 envelope
125	324	.	.	1/2 C4 envelope
110	220	.	.	DL envelope
110	220	.	.	Deutsche Industrie Norm Lang envelope
310	220	.	.	E4 envelope
220	115	.	.	E5 envelope
110	156	.	.	E6 envelope
110	220	.	.	E65 envelope
155	400	.	.	1/2 E4 envelope
104	160	.	.	Hungarian Air Mail envelope
220	220	.	.	Invitation envelope
155	220	.	.	M5 envelope
110	155	.	.	M6 envelope
110	220	.	.	M65 envelope
.	.	3.875	7.50	Monarch envelope
187	122	.	.	Russian Greetings 1 envelope
.	.	3.625	6.50	Size 6 3/4 envelope
.	.	3.575	8.875	Size 9 envelope

.	.	4.125	9.50	Size 10 envelope
.	.	4.50	10.375	Size 11 envelope
.	.	4.75	11.00	Size 12 envelope
.	.	5.00	11.50	Size 14 envelope



Words

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

A

aardwolf
abscess
accentuate
accept (receive, admit) | except (exclude)
accessible
accessory
accidentally
accommodate
accompany
accounts receivable
accrue
acknowledge, acknowledgment
acquaintance, acquainted
acquire
acronym
Ada
adapter
address
ad-lib (ad libitum)
administrate, administrator
affect (bring about) | effect (result)
affidavit (written, notarized declaration)
afterward (not *afterwards*)
aggravate (worsen) | annoy (irritate)
AI (Artificial Intelligence)
aisle (passageway) | isle (island)
algebraic
algorithm
aloud (voice orally) | allowed (permitted)
all right
allege
allude (indirect reference) | elude (evade), allusion | elusion
a lot (large amount) | allot (distribute or assign)
alphanumeric
already
ALT (key)
alternate (a substitute) | alternative (a choice)
A.M. (morning; *ante meridiem*)
amateur
amend, amendment
among (with) | between (separating)
ampersand (&)
analogous
ANSI (American National Standards Institute)
Antarctic
antecedent
anthropomorphic, anthropomorphism
anybody (any person) | any body (a body)
anyone (like anybody) | any one (any single thing)
anyway (not *anyways*)
AOL (America Online)
API (Application Programming Interface)

apostrophe
apparent
appearance
appendix
appropriate
arctic
argument (passed to a function) | parameter
Arkansas
arithmetic
Armageddon
Aspartame (artificial sweetener)
asterisk ("*" writing) | star (computing)
asthma
athletic
ASCII (American Standard Code for Information Interchange)
attaché
ATM
attendance
attorney
auxiliary
awhile (adverb: stay for awhile) | a while (stay a while)
axis, axes (plural)

B

b (bit) | B (byte)
Babbage
background
backslash (the "\" character; the "/" character is slash)
backspace (on the keyboard)
backward (not *backwards*)
banana
bargain
Basic (Beginner's All-purpose Symbolic Instruction Code — an acronym that isn't capitalized!)
baud
bazaar (market) | bizarre (manner)
BBC (British Broadcasting Company)
BBS (Bulletin Board System)
BCD (Binary Coded Decimal)
beginning
believe
benign
beside (next to) | besides (in addition)
between (separating) | among (with)
Bézier
biscuit
bitmap
bite | byte (8-bits)
bizarre
blasé
boilerplate
bookkeeper
Boolean
BPS (Bits Per Second)
briefcase
Braille
browse, browser

Btu (British thermal unit)
buoyant
bureau, bureaus
burglar
business

C

C (temperature; *Celsius, centigrade*)
cache (storage) | cash (\$)
CAD (Computer Aided Design) | CADD (Computer Aided Design and Drafting)
caffeine
calendar
cancel, canceled, cancellation
canapé
cantaloupe
capital (a city or money) | capitol (a building)
cardinal
caret (^ symbol) | carat (weight of jewels) | karat (gold fineness)
carriage return
cascade, cascading
Cassiopeia
catalog
caterpillar
CD (Compact Disc)
CD-ROM (Compact Disc Read-only Memory)
ceiling
cellar
cemetery
centimeter
cereal (grain) | serial (a series)
chagrin
chamois
champagne
chandelier
changeable
chaperon
character
chauffeur
Chernobyl
chief
chocolate
chromosome
cinnamon
circuit
circumference
CIS (Commonwealth of Independent States; formerly USSR)
CISC (Complex Instruction Set Computer)
client
COBOL (Common Business Oriented Language)
cocoa
Codepage
collapse
colloquial, colloquialism
colonel (rank) | kernel (seed)
column, columnar
commendable


commitment
committee
Compaq
compliment (praise) | complement (make whole)
commodity
concede
conceive
Connecticut
conscientious
conscious
consensus
consignment
contiguous
convenience, convenient
corduroy
cornucopia
correspondent
cough
counterfeit
CPU (Central Processing Unit), CPUs (plural)
criteria (plural), criterion (singular)
CRT (Cathode-ray Tube)
CTRL (key)
cubicle
cursor (input) | pointer (mouse)
CY (calendar year)

D

dash (the "-" character)
DAT (Digital Audio Tape)
database
dc (direct current) | DC (District of Columbia)
debonair
debt (owe) | debit (account)
debug
deceive
decrement
deference (respect) | difference (unlike)
definite
dependent
describe, description
descriptor
design
desirable
desktop
despair
desperate, desperately
dessert (sweet) | desert (abandon, desolate area)
device (tool) | devise (plan)
dialog
diaphragm
diarrhea
dash (computing) | hyphen (writing)
dictionary
Dilbert
dingbat

disappear
disappoint
disc (CD) | disk (hard or floppy)
discreet (restrained)
discrete (separate parts)
disinterested (impartial) | uninterested (not interested)
disparate
dispel
dissatisfied
DLL (Dynamic Link Library)
DNA (Deoxyribonucleic Acid)
DOS (Disk Operating System)
dot (computing) | period (writing) | point (accounting)
download
DVD-ROM

E

EBCDIC (Extended Binary Coded Decimal Interchange Code)
ecstatic, excited
effect (result) | affect (bring about)
effervescent
e.g. (for example; *exempli gratia*)
eighth
eliminate
ellipsis | ellipse
elude (evade) | allude (indirect reference), elusion | allusion
e-mail
embarrass
embezzle
em dash (the "—" character)
emoticon (ASCII symbols used in e-mail, such as :-)
emphasize
emulsion (one liquid in another) | suspension (solid particles in a liquid)
en dash (the "-" character; 1/2 em-dash)
ENIAC (Electronic Numerical Integrator And Calculator)
ensure (make sure) | insure (insurance)
entity
entropy
environment, environmental, environmentally
EPROM (Erasable Programmable Read Only Memory)
equation
equipped
erroneous
esophagus
especially (particularly) | specially (exceptional)
et al. (and others; abbreviation for *et alii*)
etc. (*et cetera*)
etiquette
EU (European Union)
euro (European currency )
every day (recurring) | everyday (ordinary)
everyone (every person) | every one (every thing)
exaggerate
exceed
excel
except (exclude) | accept (receive, admit)

existence
expense

F

facsimile
familiar
Fahrenheit
farther (about distance) | further (time or quantity)
fascinate, fascinating
fatigue
fax (facsimile)
February
fewer than (number) | less than (quantity)
fiancée (female) | fiancé (male)
filigree
file name (name) | filename (placeholder)
finally
financier
fixed-pitch (font)
flammable
fluorine, fluoride
f.o.b. (free on board)
foreclosure
foreground
forehead
foreign
foreword (book preface) | forward (direction)
formerly (earlier) | formally (formal)
forth (onward) | fourth (4th)
Fortran (Formula Translation)
forward (not *forwards*)
forward slash ("/" character)
forty
ft. (*foot*)
FTP (File Transfer Protocol)
Fractal
fragile
freight
Freon
fuse (not *fuze*)
FYROM (Former Yugoslav Republic of Macedonia)

G

gal. (*gallon*)
garçon (French waiter)
gateway
gauge
Gb (gigabit) | GB (gigabyte)
GHz (gigahertz)
GIMPS (Great Internet Mersenne Prime Search)
glacier
glamorize, glamour
glyph
good | well (I am well, chocolate is good)
gorilla (an ape) | guerrilla (paramilitary)
got (past tense of *get*; come into possession of) | have (possess)

government
grammar
gray
grease
guarantee
guess
guest
GUI (Graphical User Interface)

H

handheld
handkerchief
hardware
harass
height
heir
Heisenberg (Uncertainty Principle)
hemorrhage
hexadecimal
highlight
hierarchy, hierarchical
hopeful, hopefully
hr (*hour*)
HTML (Hypertext Markup Language)
HTTP (Hypertext Transfer Protocol)
humorous
hurrying
hygiene
hypertext
hyphen, hyphenate (dash is more common than hyphen)
hypocrisy
hypothesis

I

idol (object of worship) | idle (not busy)
i. e. (that is; *id est*)
IEEE (Institute of Electrical and Electronics Engineers, Inc.)
illustration
imply (suggest) | infer (deduce)
incidentally
incite (provoke) | insight (discerning)
increment
independent, independence
index, indexes, indices
indict
indispensable
infinitesimal
in lieu of
inline (not hyphenated)
inoculate
insure (insurance) | ensure (make sure)
Intel
intelligent
interactive
Internet (always capitalized)
Intranet (internal Internet)

I/O (input/output)
IQ (Intelligence Quotient)
irresistible
ISA (Industry Standard Architecture)
ISO (International Organization for Standardization)
isthmus
its (possessive) | it's (it is)

J

Jacquard (loom or fabric)
jalapeño
jargon
joystick
judgment
justified

K

K (kilobyte) | k (kilobit)
kamikaze
karat (gold fineness) | caret (^ symbol) | carat (weight of jewels)
karate
KB (kilobyte) | Kb (kilobit)
kernel (seed) | colonel (rank)
(Brian) Kernighan and (Dennis) Ritchie
keyboard
keystroke
keyword
kg (kilogram)
khaki
kHz (kilohertz)
kilobit (Kb) | kilobyte (KB)
kilohertz (kHz)
kluge (not *kludge*)
km (kilometer)
kW (kilowatt)
kWh (kilowatt-hour)

L

labeled
laboratory
LAN (Local Area Network)
laptop
larynx
laugh
laying (placing) | lying (reclining)
lb. (pound; *Libra*)
LCD (Liquid Crystal Display)
LED (Light-emitting Diode)
league
lectern (a stand or desk) | podium (a platform)
less than (quantity or volume) | fewer than (number)
libel (false writing) | slander (verbal false statements)
library
license
licorice
lightning (flash of light) | lightening (making less heavy)

Linotype
Linux
Linus Torvalds
liquefy
literature
localize, localization
lose (mislay) | loose (not tight)
Lovelace (Agusta Ada)
lowercase

M

m (meter)
Machiavellian
Macintosh
maintain, maintenance
mainframe
malign
manage, management
maneuver
manual
marquee
marriage
MASM (Macro Assembler)
Massachusetts
mathematical, mathematics
matrix, matrices
mattress
Mb (megabit) | MB (megabyte)
measurement
megabyte
megahertz
medieval
memento
mfg. (manufacture)
MHz (megahertz)
mi. (mile)
microcomputer
microprocessor
millennium
MIME (Multipurpose Internet Mail Extensions)
miniature
minicomputer
minuscule
mischief
Miss | Ms (no dot following Ms)
missionary
Mississippi
misspell, misspelled
misstate
mm (millimeter)
mnemonic
molasses
Mothers-in-law
monospace (fixed-pitch font)
mortgage
mosquito, mosquitoes

motherboard
movable
Mr., Mrs.
MS-DOS
multimedia
multitasking
multithread
myself
mysterious

N

n (a number, usually in italic type)
N/A (not available; not applicable)
NaN (Not a Number)
nanosecond
NCSA (National Center for Supercomputing Applications)
necessary
neighbor
network, networking
niece
notary, notarized
notebook
noticeable
ns (nanosecond) | n/s (not sufficient)
nuisance
null (without value) | NUL (ASCII character 0)
numeric, numerical

O

obedience
object-oriented
occasion
occur, occurred
o'clock
OCR (Optical Character Recognition)
odyssey
offense
okay (instead of *OK*)
omitted
online
on-screen
OOP (Object-oriented Programming)
OPEC (Organization of Petroleum Exporting Countries)
opportunity
optimistic
ordinal (number in a series)
output
over (position) | more than (quantity)
oz. (ounce)

P

palette
palmtop
parallel, parallelism, parallelogram
parameter | argument (passed to a function)
parentheses (plural), parenthesis (singular)

parliament
Pascal
passé
patients (more than one patient) | patience (being patient)
PC (Personal Computer)
PCMCIA (Personal Computer Memory Card International Association)
Pennsylvania
percent, percentage
performance
period (writing) | point (accounting) | dot (computing)
permanent
peripheral
personal (private) | personnel (members)
phenomenal, phenomenon
physician
pixel (picture element)
plaid
pneumonia
podium (a platform) | lectern (a stand or desk)
pointer (mouse) | cursor (input)
politically
pop-up
porcelain
portable
possess
potato, potatoes
P.M. (afternoon; *post meridiem*)
prairie
precede (come before) | proceed (go forward)
preceding
prefer, preferred
principle (truth) | principal (person)
privilege
probable, probably
procedure
property, properties
protégé
pseudonym
psychology
punctuation
pt. (pint | point)
ptomaine

Q

quango (Quasi Non-Governmental Organization)
qt. (quart)
quiet (silent) | quite (completely)

R

radix
RAM (Random Access Memory)
rarefy
raspberry
raster
receipt
receive

recess
recognize, recognition
recto (right) | verso (left)
recurring (not *reoccurring*)
recycle
reference
register, registry
remittance
rendezvous
repellent
repentance
reservoir
resume (continue again) | résumé (summary)
reverence, reverent
RGB (red-green-blue)
rhythm
ridiculous
RISC (Reduced Instruction Set Computer)
ROM (Read Only Memory)
rpm (revolutions per minute)
RPN (Reverse Polish Notation)
run-time (hyphenated)

S

sacrilege, sacrilegious
sandwich
sauté
S. A. S. E. (self-addressed stamped envelope)
satire (irony) | satyr (woodland creature)
scalable (rarely *scaleable*)
scenario
schematic
scissors
SCSI (Small Computer Systems Interface)
SDK (Software Development Kit)
secretary
seize
semicolon
semiconductor
separately
serial (a series) | cereal (grain)
SHIFT (key)
shortcut (not hyphenated)
siege
sieve
silicon (a silica used in chips) | silicone (a polymer goo)
similar
sincerely
slander (verbal false statements) | libel (false writing)
slash (the "/" forward slash character; backslash is "\")
smiley (emoticon for :-)
soliloquy
spaghetti
special
specially (exceptional) | especially (particularly)
specification

spreadsheet
sprite (not *spright*)
squirrel
star (computing) | asterisk ("*" writing)
stationary (stopped) | stationery (paper)
strafe
straight (not curved) | strait (channel, position)
strengthen
stylus
Styrofoam
subheading (not hyphenated)
succeed, success
suit (clothes) | suite (group)
superintendent
supersede
susceptible
suspension (solid particles in a liquid) | emulsion (one liquid in another)
SVGA (Super VGA; 800x600 pixels)
SXGA (Super XGA; 1280x1024 pixels)
syntactic, syntactical
syringe

T

tariff
temperance
tenacious
tenant (renter) | tenet (opinion, principle)
Terabyte
than | then
that (restrictive, dependent clause) | which (independent clause)
their (possessive) | there | they're (they are)
threshold
till (plow or drawer) | 'til (until)
TNT
to (direction) | too (also) | two (2)
toggle
tomato, tomatoes
tortuous (winding or twisting) | torturous (painful)
touché
toward (not *towards*)
trackball (not hyphenated)
trademark
tragedy
transferred
think (call between incompatible systems, not past tense of *think*)
troubleshoot, troubleshooting
truly
Tuesday
TVM
twip (typographic measurement, 1/1440-inch)
typographical

U

UFO (Unidentified Flying Object)
UHF (Ultra High Frequency)
UNC (Universal Naming Convention)

underscore (the "_" character)
underwear
undo (never *undos*)
uninterested (not interested) | disinterested (impartial)
UNIVAC (Universal Automatic Computer)
UNIX
UPC (Universal Product Code)
update
uppercase (not hyphenated)
usable (rarely *useable*)
USB (Universal Serial Bus)
useful
usually
UV (ultraviolet)

V

vaccinate
vacuum
Velcro
verso (left) | recto (right)
vestibule
VGA (Video Graphics Array, 640x480 pixels)
VHF (Very High Frequency)
villain
vinegar
virtual, virtualize
vs. (versus)

W

warrant
warranty (the agreement) | warrantee (the person)
Wednesday
weasel
Web (Internet)
weird
well | good (I am well, chocolate is good)
which (independent clause) | that (restrictive, dependent clause)
white space (only hyphenate as an adjective)
wholly
whose (possessive) | who's (who is)
withhold
wizard
word processor (two words, hyphenate if adjective)
workgroup
worksheet
workspace
workstation
WWW (World-Wide Web)
WYSIWYG (What You See Is What You Get)

X

x (a placeholder, usually in italic type)
Xanadu
x-axis
XGA (video resolution 1024x768 pixels)
XON/XOF

Y

y-axis
yolk
your (possessive) | you're (you are)
yourself

Z

z-axis
zeros (not zeroes)
ZIP (postal Zone Improvement Plan) | Zip (file compression or lomega disk)

This list contains misspelled, incorrectly-hyphenated, confused, misused, and incorrectly-capitalized words.



The Elements of Style

by William Strunk, Jr.

I. INTRODUCTORY

- Title
- This book is intended...
- Acknowledgments
- Some writers disregard the rules

II. ELEMENTARY RULES OF USAGE

- 1 Form the possessive singular of nouns with 's
 - Exceptions
- 2 In a series of three or more terms with a single conjunction, use a comma after each term except the last
- 3 Enclose parenthetical expressions between commas
 - Non-restrictive relative clauses
 - Restrictive relative clauses
- 4 Place a comma before and or but introducing an independent clause
 - Subordinate clauses
 - Independent clauses
- 5 Do not join independent clauses by a comma
 - Conjunctions
- 6 Do not break sentences in two
 - Emphatic sentences
- 7 A participial phrase at the beginning of a sentence must refer to the grammatical subject
 - Preceded by a conjunction or preposition
- 8 Divide words at line-ends, in accordance with their formation and pronunciation
 - Vowels
 - Double letters
 - Consonants

III. ELEMENTARY PRINCIPLES OF COMPOSITION

- 9 Make the paragraph the unit of composition: one paragraph to each topic
 - Short notice or poem
 - Report on a poem
 - Novel or historical event
 - Rules
- 10 As a rule, begin each paragraph with a topic sentence; end it in conformity with the beginning
 - Part of a larger composition
 - Narration
- 11 Use the active voice
 - Exceptions
 - Forcible writing
 - Avoid making one passive depend directly upon another
 - Don't use the subject of a passive construction to express action
- 12 Put statements in positive form
 - As a rule, it is better to express a negative in positive form
13. Omit needless words
 - Common violations
 - The fact that
 - Who is, which was, and the like
- 14 Avoid a succession of loose sentences
 - Recast sentences to remove monotony
15. Express co-ordinate ideas in similar form
 - Articles and prepositions
 - Correlative expressions
- 16 Keep related words together
 - Relative pronouns
 - Antecedents
 - Nouns in apposition
- 17 In summaries, keep to one tense
 - Summarizing
- 18 Place the emphatic words of a sentence at the end

- Periodic sentences
- Subject at the beginning

IV. A FEW MATTERS OF FORM

- Headings
- Numerals
- Parentheses
- Quotations
- Quotations of an entire line
- References
- Titles

V. WORDS AND EXPRESSIONS COMMONLY MISUSED

- Words

VI. WORDS COMMONLY MISSPELLED

- Words



The Elements of Style

by William Strunk, Jr.

Copyright 1918 By William Strunk, Jr.
Professor of English, Cornell University

William Strunk, Jr., 1869-1946

Privately printed in Ithaca, N. Y.
Press of W. P. Humphrey, Geneva, N. Y.

Click a topic to see the information in a pop-up window.

I INTRODUCTORY.

This book is intended for use in English courses in which the practice of composition is combined with the study of literature. It aims to give in brief space the principal requirements of plain English style. It aims to lighten the task of instructor and student by concentrating attention (in Chapters II and III) on a few essentials, the rules of usage and principles of composition most commonly violated. The numbers of the sections may be used as references in correcting manuscript.

The book covers only a small portion of the field of English style, but the experience of its writer has been that once past the essentials, students profit most by individual instruction based on the problems of their own work, and that each instructor has his own body of theory, which he prefers to that offered by any textbook.

The writer's colleagues in the Department of English in Cornell University have greatly helped him in the preparation of his manuscript. Mr. George McLane Wood has kindly consented to the inclusion under Rule 11 of some material from his Suggestions to Authors.

More...

The following books are recommended for reference or further study: in connection with Chapters II and IV, F. Howard Collins, *Author and Printer* (Henry Frowde); Chicago University Press, *Manual of Style*; T. L. De Vinne *Correct Composition* (The Century Company); Horace Hart, *Rules for Compositors and Printers* (Oxford University Press); George McLane Wood, *Extracts from the Style-Book of the Government Printing Office* (United States Geological Survey); in connection with Chapters III and V, Sir Arthur Quiller-Couch, *The Art of Writing* (Putnams), especially the chapter, *Interlude on Jargon*; George McLane Wood, *Suggestions to Authors* (United States Geological Survey); John Leslie Hall, *English Usage* (Scott, Foresman and Co.); James P. Kelly, *Workmanship in Words* (Little, Brown and Co.).

More...

It is an old observation that the best writers sometimes disregard the rules of rhetoric. When they do so, however, the reader will usually find in the sentence some compensating merit, attained at the cost of the violation. Unless he is certain of doing as well, he will probably do best to follow the rules. After he has learned, by their guidance, to write plain English adequate for everyday uses, let him look, for the secrets of style, to the study of the masters of literature.

1 Form the possessive singular of nouns with 's.

Follow this rule whatever the final consonant. Thus write,

Charles's friend

Burns's poems

the witch's malice

This is the usage of the United States Government Printing Office and of the Oxford University Press.

More...

Exceptions are the possessives of ancient proper names in *-es* and *-is*, the possessive *Jesus'*, and such forms as *for conscience' sake*, *for righteousness' sake*. But such forms as *Achilles' heel*, *Moses' laws*, *Isis' temple* are commonly replaced by

the heel of Achilles

the laws of Moses

the temple of Isis

The pronominal possessives *hers*, *its*, *theirs*, *yours*, and *oneself* have no apostrophe.

2 In a series of three or more terms with a single conjunction, use a comma after each term except the last.

Thus write,

red, white, and blue

honest, energetic, but headstrong

He opened the letter, read it, and made a note of its contents.

This is also the usage of the Government Printing Office and of the Oxford University Press.

In the names of business firms the last comma is omitted, as

Brown, Shipley and Company

The abbreviation *etc.*, even if only a single term comes before it, is always preceded by a comma.

3 Enclose parenthetical expressions between commas.

The best way to see a country, unless you are pressed for time, is to travel on foot.

This rule is difficult to apply; it is frequently hard to decide whether a single word, such as *however*, or a brief phrase, is or is not parenthetical. If the interruption to the flow of the sentence is but slight, the writer may safely omit the commas. But whether the interruption be slight or considerable, he must never omit one comma and leave the other. Such punctuation as

Marjorie's husband, Colonel Nelson paid us a visit yesterday,

or

My brother you will be pleased to hear, is now in perfect health,
is indefensible.

More...

Non-restrictive relative clauses are, in accordance with this rule, set off by commas.

The audience, which had at first been indifferent, became more and more interested.

Similar clauses introduced by where and when are similarly punctuated.

In 1769, when Napoleon was born, Corsica had but recently been acquired by France.

Nether Stowey, where Coleridge wrote *The Rime of the Ancient Mariner*, is a few miles from Bridgewater.

In these sentences the clauses introduced by *which*, *when*, and *where* are non-restrictive; they do not limit the application of the words on which they depend, but add, parenthetically, statements supplementing those in the principal clauses. Each sentence is a combination of two statements which might have been made independently.

The audience was at first indifferent. Later it became more and more interested.

Napoleon was born in 1769. At that time Corsica had but recently been acquired by France.

Coleridge wrote *The Rime of the Ancient Mariner* at Nether Stowey. Nether Stowey is only a few miles from Bridgewater.

Restrictive relative clauses are not set off by commas.

The candidate who best meets these requirements will obtain the place.

In this sentence the relative clause restricts the application of the word *candidate* to a single person. Unlike those above, the sentence cannot be split into two independent statements.

The abbreviations *etc.* and *jr.* are always preceded by a comma, and except at the end of a sentence, followed by one.

Similar in principle to the enclosing of parenthetical expressions between commas is the setting off by commas of phrases or dependent clauses preceding or following the main clause of a sentence. The sentences quoted in this section and under Rules 4, 5, 6, 7, 16, and 18 should afford sufficient guidance.

If a parenthetical expression is preceded by a conjunction, place the first comma before the conjunction, not after it.

He saw us coming, and unaware that we had learned of his treachery, greeted us with a smile.

4 Place a comma before *and* or *but* introducing an independent clause.

The early records of the city have disappeared, and the story of its first years can no longer be reconstructed.

The situation is perilous, but there is still one chance of escape.

Sentences of this type, isolated from their context, may seem to be in need of rewriting. As they make complete sense when the comma is reached, the second clause has the appearance of an after-thought. Further, *and*, is the least specific of connectives. Used between independent clauses, it indicates only that a relation exists between them without defining that relation. In the example above, the relation is that of cause and result. The two sentences might be rewritten:

As the early records of the city have disappeared, the story of its first years can no longer be reconstructed.

Although the situation is perilous, there is still one chance of escape.

More...

Or the subordinate clauses might be replaced by phrases:

Owing to the disappearance of the early records of the city, the story of its first years can no longer be reconstructed.

In this perilous situation, there is still one chance of escape.

But a writer may err by making his sentences too uniformly compact and periodic, and an occasional loose sentence prevents the style from becoming too formal and gives the reader a certain relief. Consequently, loose sentences of the type first quoted are common in easy, unstudied writing. But a writer should be careful not to construct too many of his sentences after this pattern (see [Rule 14](#)).

Two-part sentences of which the second member is introduced by as (in the sense of because), for, or, nor, and while (in the sense of and at the same time) likewise require a comma before the conjunction.

More...

If a dependent clause, or an introductory phrase requiring to be set off by a comma, precedes the second independent clause, no comma is needed after the conjunction.

The situation is perilous, but if we are prepared to act promptly, there is still one chance of escape.

For two-part sentences connected by an adverb, see the next section.

5 Do not join independent clauses by a comma.

If two or more clauses, grammatically complete and not joined by a conjunction, are to form a single compound sentence, the proper mark of punctuation is a semicolon.

Stevenson's romances are entertaining; they are full of exciting adventures.

It is nearly half past five; we cannot reach town before dark.

It is of course equally correct to write the above as two sentences each, replacing the semicolons by periods.

Stevenson's romances are entertaining. They are full of exciting adventures.

It is nearly half past five. We cannot reach town before dark.

More...

If a conjunction is inserted, the proper mark is a comma (Rule 4).

Stevenson's romances are entertaining, for they are full of exciting adventures.

It is nearly half past five, and we cannot reach town before dark.

Note that if the second clause is preceded by an adverb, such as *accordingly*, *besides*, *so*, *then*, *therefore*, or *thus*, and not by a conjunction, the semicolon is still required.

I had never been in the place before; so I had difficulty in finding my way about.

In general, however, it is best, in writing, to avoid using *so* in this manner; there is danger that the writer who uses it at all may use it too often. A simple correction, usually serviceable, is to omit the word *so*, and begin the first clause with *as*:

As I had never been in the place before, I had difficulty in finding my way about.

If the clauses are very short, and are alike in form, a comma is usually permissible:

Man proposes, God disposes.

The gate swung apart, the bridge fell, the portcullis was drawn up.

6 Do not break sentences in two.

In other words, do not use periods for commas.

I met them on a Cunard liner several years ago. Coming home from Liverpool to New York.

He was an interesting talker. A man who had traveled all over the world, and lived in half a dozen countries.

In both these examples, the first period should be replaced by a comma, and the following word begun with a small letter.

More...

It is permissible to make an emphatic word or expression serve the purpose of a sentence and to punctuate it accordingly:

Again and again he called out. No reply.

The writer must, however, be certain that the emphasis is warranted, and that he will not be suspected of a mere blunder in punctuation.

Rules 3, 4, 5, and 6 cover the most important principles in the punctuation of ordinary sentences; they should be so thoroughly mastered that their application becomes second nature.

7 A participial phrase at the beginning of a sentence must refer to the grammatical subject.

Walking slowly down the road, he saw a woman accompanied by two children.

The word *walking* refers to the subject of the sentence, not to the woman. If the writer wishes to make it refer to the woman, he must recast the sentence:

He saw a woman, accompanied by two children, walking slowly down the road.

More...

Participial phrases preceded by a conjunction or by a preposition, nouns in apposition, adjectives, and adjective phrases come under the same rule if they begin the sentence.

On arriving in Chicago, his friends met him at the station.

When he arrived (or, On his arrival) in Chicago, his friends met him at the station.

A soldier of proved valor, they entrusted him with the defense of the city.

A soldier of proved valor, he was entrusted with the defense of the city.

Young and inexperienced, the task seemed easy to me.

Young and inexperienced, I thought the task easy.

Without a friend to counsel him, the temptation proved irresistible.

Without a friend to counsel him, he found the temptation irresistible.

Sentences violating this rule are often ludicrous.

Being in a dilapidated condition, I was able to buy the house very cheap.

Divide words at line-ends, in accordance with their formation and pronunciation.

If there is room at the end of a line for one or more syllables of a word, but not for the whole word, divide the word, unless this involves cutting off only a single letter, or cutting off only two letters of a long word. No hard and fast rule for all words can be laid down. The principles most frequently applicable are:

a. Divide the word according to its formation:

know-ledge (not knowl-edge); Shake-speare (not Shakes-peare); de-scribe (not des-cribe); atmo-sphere (not atmos-phere);

More...

- b Divide "on the vowel:"
edi-ble (not ed-ible); propo-sition; ordi-nary; espe-cial; reli-gious; oppo-nents; regu-lar; classi-fi-ca-tion (three divisions possible); deco-rative; presi-dent;
- c. Divide between double letters, unless they come at the end of the simple form of the word:
Apen-nines; Cincin-nati; refer-ring; but tell-ing.

More...

The treatment of consonants in combination is best shown from examples:

for-tune; pic-ture; presump-tuous; illus-tration; sub-stan-tial (either division); indus-try; instruc-tion; sug-ges-tion; incen-diary.

The student will do well to examine the syllable-division in a number of pages of any carefully printed book.

9 Make the paragraph the unit of composition: one paragraph to each topic.

If the subject on which you are writing is of slight extent, or if you intend to treat it very briefly, there may be no need of subdividing it into topics. Thus a brief description, a brief summary of a literary work, a brief account of a single incident, a narrative merely outlining an action, the setting forth of a single idea, any one of these is best written in a single paragraph. After the paragraph has been written, it should be examined to see whether subdivision will not improve it.

Ordinarily, however, a subject requires subdivision into topics, each of which should be made the subject of a paragraph. The object of treating each topic in a paragraph by itself is, of course, to aid the reader. The beginning of each paragraph is a signal to him that a new step in the development of the subject has been reached.

More...

The extent of subdivision will vary with the length of the composition. For example, a short notice of a book or poem might consist of a single paragraph. One slightly longer might consist of two paragraphs:

- A. Account of the work.
- B. Critical discussion.

More...

A report on a poem, written for a class in literature, might consist of seven paragraphs:

- A. Facts of composition and publication.
- B. Kind of poem; metrical form.
- C. Subject.
- D. Treatment of subject.
- E. For what chiefly remarkable.
- F. Wherein characteristic of the writer.
- G. Relationship to other works.

The contents of paragraphs C and D would vary with the poem. Usually, paragraph C would indicate the actual or imagined circumstances of the poem (the situation), if these call for explanation, and would then state the subject and outline its development. If the poem is a narrative in the third person throughout, paragraph C need contain no more than a concise summary of the action. Paragraph D would indicate the leading ideas and show how they are made prominent, or would indicate what points in the narrative are chiefly emphasized.

A novel might be discussed under the heads:

- A. Setting.
- B. Plot.
- C. Characters.
- D. Purpose.

A historical event might be discussed under the heads:

- A. What led up to the event.
- B. Account of the event.
- C. What the event led up to.

In treating either of these last two subjects, the writer would probably find it necessary to subdivide one or more of the topics here given.

More...

As a rule, single sentences should not be written or printed as paragraphs. An exception may be made of sentences of transition, indicating the relation between the parts of an exposition or argument.

In dialogue, each speech, even if only a single word, is a paragraph by itself; that is, a new paragraph begins with each change of speaker. The application of this rule, when dialogue and narrative are combined, is best learned from examples in well-printed works of fiction.

10 As a rule, begin each paragraph with a topic sentence; end it in conformity with the beginning.

Again, the object is to aid the reader. The practice here recommended enables him to discover the purpose of each paragraph as he begins to read it, and to retain the purpose in mind as he ends it. For this reason, the most generally useful kind of paragraph, particularly in exposition and argument, is that in which

- a. the topic sentence comes at or near the beginning;
- b. the succeeding sentences explain or establish or develop the statement made in the topic sentence; and
- c. the final sentence either emphasizes the thought of the topic sentence or states some important consequence.

Ending with a digression, or with an unimportant detail, is particularly to be avoided.

More...

If the paragraph forms part of a larger composition, its relation to what precedes, or its function as a part of the whole, may need to be expressed. This can sometimes be done by a mere word or phrase (*again; therefore; for the same reason*) in the topic sentence. Sometimes, however, it is expedient to precede the topic sentence by one or more sentences of introduction or transition. If more than one such sentence is required, it is generally better to set apart the transitional sentences as a separate paragraph.

According to the writer's purpose, he may, as indicated above, relate the body of the paragraph to the topic sentence in one or more of several different ways. He may make the meaning of the topic sentence clearer by restating it in other forms, by defining its terms, by denying the converse, by giving illustrations or specific instances; he may establish it by proofs; or he may develop it by showing its implications and consequences. In a long paragraph, he may carry out several of these processes.

In narration and description the paragraph sometimes begins with a concise, comprehensive statement serving to hold together the details that follow.

The breeze served us admirably.

The campaign opened with a series of reverses.

The next ten or twelve pages were filled with a curious set of entries.

But this device, if too often used, would become a mannerism. More commonly the opening sentence simply indicates by its subject with what the paragraph is to be principally concerned.

At length I thought I might return towards the stockade.

He picked up the heavy lamp from the table and began to explore.

Another flight of steps, and they emerged on the roof.

The brief paragraphs of animated narrative, however, are often without even this semblance of a topic sentence. The break between them serves the purpose of a rhetorical pause, throwing into prominence some detail of the action.

11 Use the active voice.

The active voice is usually more direct and vigorous than the passive:

I shall always remember my first visit to Boston.

This is much better than

My first visit to Boston will always be remembered by me.

The latter sentence is less direct, less bold, and less concise. If the writer tries to make it more concise by omitting "by me,"

My first visit to Boston will always be remembered,

it becomes indefinite: is it the writer, or some person undisclosed, or the world at large, that will always remember this visit?

More...

This rule does not, of course, mean that the writer should entirely discard the passive voice, which is frequently convenient and sometimes necessary.

The dramatists of the Restoration are little esteemed to-day.

Modern readers have little esteem for the dramatists of the Restoration.

The first would be the right form in a paragraph on the dramatists of the Restoration; the second, in a paragraph on the tastes of modern readers. The need of making a particular word the subject of the sentence will often, as in these examples, determine which voice is to be used.

The habitual use of the active voice, however, makes for forcible writing. This is true not only in narrative principally concerned with action, but in writing of any kind. Many a tame sentence of description or exposition can be made lively and emphatic by substituting a transitive in the active voice for some such perfunctory expression as there is, or could be heard.

There were a great number of dead leaves lying on the ground.

Dead leaves covered the ground.

The sound of the falls could still be heard.

The sound of the falls still reached our ears.

The reason that he left college was that his health became impaired.

Failing health compelled him to leave college.

It was not long before he was very sorry that he had said what he had.

He soon repented his words.

As a rule, avoid making one passive depend directly upon another.

Gold was not allowed to be exported.

It was forbidden to export gold (The export of gold was prohibited).

He has been proved to have been seen entering the building.

It has been proved that he was seen to enter the building.

In both the examples above, before correction, the word properly related to the second passive is made the subject of the first.

A common fault is to use as the subject of a passive construction a noun which expresses the entire action, leaving to the verb no function beyond that of completing the sentence.

A survey of this region was made in 1900.

This region was surveyed in 1900.

Mobilization of the army was rapidly carried out.

The army was rapidly mobilized.

Confirmation of these reports cannot be obtained.

These reports cannot be confirmed.

Compare the sentence, "The export of gold was prohibited," in which the predicate "was prohibited" expresses something not implied in "export."

12 Put statements in positive form.

Make definite assertions. Avoid tame, colorless, hesitating, non-committal language. Use the word not as a means of denial or in antithesis, never as a means of evasion.

He was not very often on time.

He usually came late.

He did not think that studying Latin was much use.

He thought the study of Latin useless.

The Taming of the Shrew is rather weak in spots. Shakespeare does not portray Katharine as a very admirable character, nor does Bianca remain long in memory as an important character in Shakespeare's works.

The women in *The Taming of the Shrew* are unattractive. Katharine is disagreeable, Bianca insignificant.

The last example, before correction, is indefinite as well as negative. The corrected version, consequently, is simply a guess at the writer's intention.

All three examples show the weakness inherent in the word *not*. Consciously or unconsciously, the reader is dissatisfied with being told only what is not; he wishes to be told what is. Hence, as a rule, it is better to express a negative in positive form.

More...

As a rule, it is better to express a negative in positive form.

not honest

dishonest

not important

trifling

did not remember

forgot

did not pay any attention to

ignored

did not have much confidence in

distrusted

The antithesis of negative and positive is strong:

Not charity, but simple justice.

Not that I loved Caesar less, but Rome the more.

Negative words other than *not* are usually strong:

The sun never sets upon the British flag.

13 Omit needless words.

Vigorous writing is concise. A sentence should contain no unnecessary words, a paragraph no unnecessary sentences, for the same reason that a drawing should have no unnecessary lines and a machine no unnecessary parts. This requires not that the writer make all his sentences short, or that he avoid all detail and treat his subjects only in outline, but that every word tell.

More...

Many expressions in common use violate this principle:

the question as to whether

whether (the question whether)

there is no doubt but that

no doubt (doubtless)

used for fuel purposes

used for fuel

he is a man who

he

in a hasty manner

hastily

this is a subject which

this subject

His story is a strange one.

His story is strange.

More...

In especial the expression *the fact that* should be revised out of every sentence in which it occurs.

owing to the fact that
since (because)

in spite of the fact that
though (although)

call your attention to the fact that
remind you (notify you)

I was unaware of the fact that
I was unaware that (did not know)

the fact that he had not succeeded
his failure

the fact that I had arrived
my arrival

See also under *case, character, nature, system* in Chapter V(Words).

More...

Who is, which was, and the like are often superfluous.

His brother, who is a member of the same firm

His brother, a member of the same firm

Trafalgar, which was Nelson's last battle

Trafalgar, Nelson's last battle

As positive statement is more concise than negative, and the active voice more concise than the passive, many of the examples given under Rules 11 and 12 illustrate this rule as well.

A common violation of conciseness is the presentation of a single complex idea, step by step, in a series of sentences which might to advantage be combined into one.

Macbeth was very ambitious. This led him to wish to become king of Scotland. The witches told him that this wish of his would come true. The king of Scotland at this time was Duncan. Encouraged by his wife, Macbeth murdered Duncan. He was thus enabled to succeed Duncan as king. (55 words.)

Encouraged by his wife, Macbeth achieved his ambition and realized the prediction of the witches by murdering Duncan and becoming king of Scotland in his place. (26 words.)

14 Avoid a succession of loose sentences.

This rule refers especially to loose sentences of a particular type, those consisting of two co-ordinate clauses, the second introduced by a conjunction or relative. Although single sentences of this type may be unexceptionable (see under Rule 4), a series soon becomes monotonous and tedious.

An unskillful writer will sometimes construct a whole paragraph of sentences of this kind, using as connectives *and*, *but*, and less frequently, *who*, *which*, *when*, *where*, and *while*, these last in non-restrictive senses (see under Rule 3).

The third concert of the subscription series was given last evening, and a large audience was in attendance. Mr. Edward Appleton was the soloist, and the Boston Symphony Orchestra furnished the instrumental music. The former showed himself to be an artist of the first rank, while the latter proved itself fully deserving of its high reputation. The interest aroused by the series has been very gratifying to the Committee, and it is planned to give a similar series annually hereafter. The fourth concert will be given on Tuesday, May 10, when an equally attractive programme will be presented.

Apart from its triteness and emptiness, the paragraph above is bad because of the structure of its sentences, with their mechanical symmetry and sing-song. Contrast with them the sentences in the paragraphs quoted under Rule 10, or in any piece of good English prose, as the preface (Before the Curtain) to *Vanity Fair*.

If the writer finds that he has written a series of sentences of the type described, he should recast enough of them to remove the monotony, replacing them by simple sentences, by sentences of two clauses joined by a semicolon, by periodic sentences of two clauses, by sentences, loose or periodic, of three clauses--whichever best represent the real relations of the thought.

15 Express co-ordinate ideas in similar form.

This principle, that of parallel construction, requires that expressions of similar content and function should be outwardly similar. The likeness of form enables the reader to recognize more readily the likeness of content and function. Familiar instances from the Bible are the Ten Commandments, the Beatitudes, and the petitions of the Lord's Prayer.

The unskillful writer often violates this principle, from a mistaken belief that he should constantly vary the form of his expressions. It is true that in repeating a statement in order to emphasize it he may have need to vary its form. For illustration, see the paragraph from Stevenson quoted under Rule 10. But apart from this, he should follow the principle of parallel construction.

Formerly, science was taught by the textbook method, while now the laboratory method is employed.

Formerly, science was taught by the textbook method; now it is taught by the laboratory method.

The left-hand version gives the impression that the writer is undecided or timid; he seems unable or afraid to choose one form of expression and hold to it. The right-hand version shows that the writer has at least made his choice and abided by it.

By this principle, an article or a preposition applying to all the members of a series must either be used only before the first term or else be repeated before each term.

The French, the Italians, Spanish, and Portuguese

The French, the Italians, the Spanish, and the Portuguese

In spring, summer, or in winter

In spring, summer, or winter (In spring, in summer, or in winter)

More...

Correlative expressions (*both, and; not, but; not only, but also; either, or; first, second, third; and the like*) should be followed by the same grammatical construction. Many violations of this rule can be corrected by rearranging the sentence.

It was both a long ceremony and very tedious.

The ceremony was both long and tedious.

A time not for words, but action

A time not for words, but for action

Either you must grant his request or incur his ill will.

You must either grant his request or incur his ill will.

My objections are, first, the injustice of the measure; second, that it is unconstitutional.

My objections are, first, that the measure is unjust; second, that it is unconstitutional.

See also the third example under [Rule 12](#) and the last under [Rule 13](#).

It may be asked, what if a writer needs to express a very large number of similar ideas, say twenty? Must he write twenty consecutive sentences of the same pattern? On closer examination he will probably find that the difficulty is imaginary, that his twenty ideas can be classified in groups, and that he need apply the principle only within each group. Otherwise he had best avoid the difficulty by putting his statements in the form of a table.

16 Keep related words together.

The position of the words in a sentence is the principal means of showing their relationship. The writer must therefore, so far as possible, bring together the words, and groups of words, that are related in thought, and keep apart those which are not so related.

The subject of a sentence and the principal verb should not, as a rule, be separated by a phrase or clause that can be transferred to the beginning.

Wordsworth, in the fifth book of *The Excursion*, gives a minute description of this church.

In the fifth book of *The Excursion*, Wordsworth gives a minute description of this church.

Cast iron, when treated in a Bessemer converter, is changed into steel.

By treatment in a Bessemer converter, cast iron is changed into steel.

More...

The objection is that the interposed phrase or clause needlessly interrupts the natural order of the main clause. This objection, however, does not usually hold when the order is interrupted only by a relative clause or by an expression in apposition. Nor does it hold in periodic sentences in which the interruption is a deliberately used means of creating suspense (see examples under [Rule 18](#)).

The relative pronoun should come, as a rule, immediately after its antecedent.

There was a look in his eye that boded mischief.

In his eye was a look that boded mischief.

He wrote three articles about his adventures in Spain, which were published in *Harper's Magazine*.

He published in *Harper's Magazine* three articles about his adventures in Spain.

This is a portrait of Benjamin Harrison, grandson of William Henry Harrison, who became President in 1889.

This is a portrait of Benjamin Harrison, grandson of [William Henry Harrison](#). He became President in 1889.

More...

If the antecedent consists of a group of words, the relative comes at the end of the group, unless this would cause ambiguity.

The Superintendent of the Chicago Division, who

A proposal to amend the Sherman Act, which has been variously judged

A proposal, which has been variously judged, to amend the Sherman Act

A proposal to amend the much-debated Sherman Act

The grandson of William Henry Harrison, who

William Henry Harrison's grandson, Benjamin Harrison, who

More...

A noun in apposition may come between antecedent and relative, because in such a combination no real ambiguity can arise.

The Duke of York, his brother, who was regarded with hostility by the Whigs

Modifiers should come, if possible next to the word they modify. If several expressions modify the same word, they should be so arranged that no wrong relation is suggested.

All the members were not present.

Not all the members were present.

He only found two mistakes.

He found only two mistakes.

Major R. E. Joyce will give a lecture on Tuesday evening in Bailey Hall, to which the public is invited, on "My Experiences in Mesopotamia" at eight P. M.

On Tuesday evening at eight P. M., Major R. E. Joyce will give in Bailey Hall a lecture on "My Experiences in Mesopotamia." The public is invited.

17 In summaries, keep to one tense.

In summarizing the action of a drama, the writer should always use the present tense. In summarizing a poem, story, or novel, he should preferably use the present, though he may use the past if he prefers. If the summary is in the present tense, antecedent action should be expressed by the perfect; if in the past, by the past perfect.

An unforeseen chance prevents Friar John from delivering Friar Lawrence's letter to Romeo. Juliet, meanwhile, owing to her father's arbitrary change of the day set for her wedding, has been compelled to drink the potion on Tuesday night, with the result that Balthasar informs Romeo of her supposed death before Friar Lawrence learns of the non-delivery of the letter.

But whichever tense be used in the summary, a past tense in indirect discourse or in indirect question remains unchanged.

The Legate inquires who struck the blow.

Apart from the exceptions noted, whichever tense the writer chooses, he should use throughout. Shifting from one tense to the other gives the appearance of uncertainty and irresolution (compare Rule 15).

More...

In presenting the statements or the thought of some one else, as in summarizing an essay or reporting a speech, the writer should avoid intercalating such expressions as "he said," "he stated," "the speaker added," "the speaker then went on to say," "the author also thinks," or the like. He should indicate clearly at the outset, once for all, that what follows is summary, and then waste no words in repeating the notification.

In notebooks, in newspapers, in handbooks of literature, summaries of one kind or another may be indispensable, and for children in primary schools it is a useful exercise to retell a story in their own words. But in the criticism or interpretation of literature the writer should be careful to avoid dropping into summary. He may find it necessary to devote one or two sentences to indicating the subject, or the opening situation, of the work he is discussing; he may cite numerous details to illustrate its qualities. But he should aim to write an orderly discussion supported by evidence, not a summary with occasional comment. Similarly, if the scope of his discussion includes a number of works, he will as a rule do better not to take them up singly in chronological order, but to aim from the beginning at establishing general conclusions.

18 Place the emphatic words of a sentence at the end.

The proper place for the word, or group of words, which the writer desires to make most prominent is usually the end of the sentence.

Humanity has hardly advanced in fortitude since that time, though it has advanced in many other ways.

Humanity, since that time, has advanced in many other ways, but it has hardly advanced in fortitude.

This steel is principally used for making razors, because of its hardness.

Because of its hardness, this steel is principally used in making razors.

The word or group of words entitled to this position of prominence is usually the logical predicate, that is, the *new* element in the sentence, as it is in the second example.

The effectiveness of the periodic sentence arises from the prominence which it gives to the main statement.

Four centuries ago, Christopher Columbus, one of the Italian mariners whom the decline of their own republics had put at the service of the world and of adventure, seeking for Spain a westward passage to the Indies as a set-off against the achievements of Portuguese discoverers, lighted on America.

With these hopes and in this belief I would urge you, laying aside all hindrance, thrusting away all private aims, to devote yourselves unswervingly and unflinchingly to the vigorous and successful prosecution of this war.

The other prominent position in the sentence is the beginning. Any element in the sentence, other than the subject, becomes emphatic when placed first.

Deceit or treachery he could never forgive.

So vast and rude, fretted by the action of nearly three thousand years, the fragments of this architecture may often seem, at first sight, like works of nature.

A subject coming first in its sentence may be emphatic, but hardly by its position alone. In the sentence,

Great kings worshipped at his shrine,

the emphasis upon *kings* arises largely from its meaning and from the context. To receive special emphasis, the subject of a sentence must take the position of the predicate.

Through the middle of the valley flowed a winding stream.

The principle that the proper place for what is to be made most prominent is the end applies equally to the words of a sentence, to the sentences of a paragraph, and to the paragraphs of a composition.

Headings.

Leave a blank line, or its equivalent in space, after the title or heading of a manuscript. On succeeding pages, if using ruled paper, begin on the first line.

Numerals.

Do not spell out dates or other serial numbers. Write them in figures or in Roman notation, as may be appropriate.

August 9, 1918

Rule 3

Chapter XII

352d Infantry

Parentheses.

A sentence containing an expression in parenthesis is punctuated, outside of the marks of parenthesis, exactly as if the expression in parenthesis were absent. The expression within is punctuated as if it stood by itself, except that the final stop is omitted unless it is a question mark or an exclamation point.

I went to his house yesterday (my third attempt to see him), but he had left town.

He declares (and why should we doubt his good faith?) that he is now certain of success.

(When a wholly detached expression or sentence is parenthesized, the final stop comes before the last mark of parenthesis.)

Quotations.

Formal quotations, cited as documentary evidence, are introduced by a colon and enclosed in quotation marks.

The provision of the Constitution is: "No tax or duty shall be laid on articles exported from any state."

Quotations grammatically in apposition or the direct objects of verbs are preceded by a comma and enclosed in quotation marks.

I recall the maxim of La Rochefoucauld, "Gratitude is a lively sense of benefits to come."

Aristotle says, "Art is an imitation of nature."

More...

Quotations of an entire line, or more, of verse, are begun on a fresh line and centered, but not enclosed in quotation marks.

Wordsworth's enthusiasm for the Revolution was at first unbounded:
Bliss was it in that dawn to be alive,
But to be young was very heaven!

Quotations introduced by *that* are regarded as in indirect discourse and not enclosed in quotation marks.

Keats declares that beauty is truth, truth beauty.

Proverbial expressions and familiar phrases of literary origin require no quotation marks.

These are the times that try men's souls.
He lives far from the madding crowd.

The same is true of colloquialisms and slang.

References.

In scholarly work requiring exact references, abbreviate titles that occur frequently, giving the full forms in an alphabetical list at the end. As a general practice, give the references in parenthesis or in footnotes, not in the body of the sentence. Omit the words *act*, *scene*, *line*, *book*, *volume*, *page*, except when referring by only one of them. Punctuate as indicated below.

In the second scene of the third act

In III.ii (still better, simply insert III.ii in parenthesis at the proper place in the sentence)

After the killing of Polonius, Hamlet is placed under guard (IV. ii. 14).

2 *Samuel* i:17-27

Othello II.iii 264-267, III.iii. 155-161

Titles.

For the titles of literary works, scholarly usage prefers italics with capitalized initials. The usage of editors and publishers varies, some using italics with capitalized initials, others using Roman with capitalized initials and with or without quotation marks. Use italics (indicated in manuscript by underscoring), except in writing for a periodical that follows a different practice. Omit initial *A* or *The* from titles when you place the possessive before them.

The Iliad; *the Odyssey*; *As You Like It*; *To a Skylark*; *The Newcomes*; *A Tale of Two Cities*; *Dicken's Tale of Two Cities*.

Countries

A2	A3	ISO	Phone	Country
AF	AFG	004		Afghanistan
AL	ALB	008	335	Albania
DZ	DZA	012	213	Algeria
AS	ASM	016	684	American Samoa
AD	AND	020	33	Andorra
AO	AGO	024		Angola
AI	AIA	660	809	Anguilla
AQ	ATA	010	672	Antarctica
AG	ATG	028	809	Antigua And Barbuda
AR	ARG	032	54	Argentina
AM	ARM	051		Armenia
AW	ABW	533	297	Aruba
AU	AUS	036	61	Australia
AT	AUT	040	43	Austria
AZ	AZE	031		Azerbaijan
BS	BHS	044	809	Bahamas
BH	BHR	048		Bahrain
BD	BGD	050		Bangladesh
BB	BRB	052	809	Barbados
BY	BLR	112		Belarus
BE	BEL	056	32	Belgium
BZ	BLZ	084	501	Belize
BJ	BEN	204	229	Benin
BM	BMU	060	809	Bermuda
BT	BTN	064		Bhutan
BO	BOL	068	591	Bolivia
BA	BIH	070		Bosnia And Herzegovina
BW	BWA	072	267	Botswana
BV	BVT	074		Bouvet Island
BR	BRA	076	55	Brazil
IO	IOT	086		British Indian Ocean Territory
BN	BRN	096	673	Brunei Darussalam
BG	BGR	100		Bulgaria
BF	BFA	854		Burkina Faso
BI	BDI	108		Burundi
KH	KHM	116		Cambodia
CM	CMR	120	237	Cameroon
CA	CAN	124	1	Canada
CV	CPV	132	238	Cape Verde Islands
KY	CYM	136	809	Cayman Islands
CF	CAF	140		Central African Republic
TD	TCD	148		Chad
CL	CHL	152	56	Chile
CN	CHN	156	86	China
CX	CXR	162		Christmas Island
CC	CCK	166		Cocos (Keeling) Islands
CO	COL	170	57	Colombia
KM	COM	174		Comoros
CG	COG	178	242	Congo
CK	COK	184		Cook Islands
CR	CRI	188	506	Costa Rica

CI	CIV	384	225	Cote D'Ivoire
HR	HRV	191		Croatia (Hrvatska)
CU	CUB	192		Cuba
CY	CYP	196	357	Cyprus
CZ	CZE	203	42	Czech Republic
DK	DNK	208	45	Denmark
DJ	DJI	262	253	Djibouti
DM	DMA	212	809	Dominica
DO	DOM	214	809	Dominican Republic
TP	TMP	626		East Timor
EC	ECU	218	593	Ecuador
EG	EGY	818	20	Egypt
SV	SLV	222	503	El Salvador
GQ	GNQ	226		Equatorial Guinea
ER	ERI	232		Eritrea
EE	EST	233		Estonia
ET	ETH	231	251	Ethiopia
FK	FLK	238		Falkland Islands (Malvinas)
FO	FRO	234	298	Faroe Islands
FJ	FJI	242	679	Fiji
FI	FIN	246	358	Finland
FR	FRA	250	33	France
FX	FXX	249	596	France, Metropolitan
GF	GUF	254	594	French Guiana
PF	PYF	258	689	French Polynesia
TF	ATF	260		French Southern Territories
GA	GAB	266	241	Gabon
GM	GMB	270	220	Gambia
GE	GEO	268		Georgia
DE	DEU	276	49	Germany
GH	GHA	288	233	Ghana
GI	GIB	292	350	Gibraltar
GR	GRC	300	30	Greece
GL	GRL	304	299	Greenland
GD	GRD	308	809	Grenada
GP	GLP	312	590	Guadeloupe
GU	GUM	316	671	Guam
GT	GTM	320	502	Guatemala
GN	GIN	324	224	Guinea
GW	GNB	624		Guinea-Bissau
GY	GUY	328	592	Guyana
HT	HTI	332	509	Haiti
HM	HMD	334		Heard And Mc Donald Islands
HN	HND	340	504	Honduras
HK	HKG	344	852	Hong Kong
HU	HUN	348	36	Hungary
IS	ISL	352	354	Iceland
IN	IND	356	91	India
ID	IDN	360	62	Indonesia
IR	IRN	364	98	Iran (Islamic Republic Of)
IQ	IRQ	368	964	Iraq
IE	IRL	372	964	Ireland
IL	ISR	376	972	Israel

IT	ITA	380	39	Italy
JM	JAM	388	809	Jamaica
JP	JPN	392	81	Japan
JO	JOR	400	962	Jordan
KZ	KAZ	398		Kazakhstan
KE	KEN	404	254	Kenya
KI	KIR	296	686	Kiribati
KP	PRK	408	82	Korea, Democratic People's Republic Of
KR	KOR	410		Korea, Republic Of
KW	KWT	414	965	Kuwait
KG	KGZ	417		Kyrgyzstan
LA	LAO	418		Lao People's Democratic Republic
LV	LVA	428		Latvia
LB	LBN	422	961	Lebanon
LS	LSO	426	266	Lesotho
LR	LBR	430	231	Liberia
LY	LBY	434	218	Libyan Arab Jamahiriya
LI	LIE	438	41	Liechtenstein
LT	LTU	440		Lithuania
LU	LUX	442	352	Luxembourg
MO	MAC	446	853	Macau
MK	MKD	807	38	Macedonia, The Former Yugoslav Republic Of
MG	MDG	450		Madagascar
MW	MWI	454	265	Malawi
MY	MYS	458	60	Malaysia
MV	MDV	462	960	Maldives
ML	MLI	466	223	Mali Republic
MT	MLT	470	356	Malta
MH	MHL	584	692	Marshall Islands
MQ	MTQ	474		Martinique
MR	MRT	478		Mauritania
MU	MUS	480	230	Mauritius
YT	MYT	175		Mayotte
MX	MEX	484	52	Mexico
FM	FSM	583	691	Micronesia, Federated States Of
MD	MDA	498		Moldova, Republic Of
MC	MCO	492	33	Monaco
MN	MNG	496		Mongolia
MS	MSR	500	809	Montserrat
MA	MAR	504	212	Morocco
MZ	MOZ	508		Mozambique
MM	MMR	104		Myanmar
NA	NAM	516	264	Namibia
NR	NRU	520	674	Nauru
NP	NPL	524	977	Nepal
NL	NLD	528	31	Netherlands
AN	ANT	530	599	Netherlands Antilles
			809	Nevis
NC	NCL	540	687	New Caledonia
NZ	NZL	554	64	New Zealand
NI	NIC	558	505	Nicaragua
NE	NER	562	227	Niger
NG	NGA	566	234	Nigeria

NU	NIU	570		Niue
NF	NFK	574		Norfolk Island
MP	MNP	580		Northern Mariana Islands
NO	NOR	578	47	Norway
OM	OMN	512	968	Oman
PK	PAK	586	92	Pakistan
PW	PLW	585		Palau
PA	PAN	591	507	Panama
PG	PNG	598	675	Papua New Guinea
PY	PRY	600	595	Paraguay
PE	PER	604	51	Peru
PH	PHL	608	63	Philippines
PN	PCN	612		Pitcairn
PL	POL	616	48	Poland
PT	PRT	620	351	Portugal
PR	PRI	630		Puerto Rico
QA	QAT	634	974	Qatar
RE	REU	638	262	Reunion Island
RO	ROM	642	40	Romania
RU	RUS	643		Russian Federation
RW	RWA	646	250	Rwanda
KN	KNA	659		Saint Kitts And Nevis
LC	LCA	662		Saint Lucia
VC	VCT	670		Saint Vincent And The Grenadines
WS	WSM	882		Samoa
SM	SMR	674	39	San Marino
ST	STP	678		Sao Tome And Principe
SA	SAU	682	966	Saudi Arabia
SN	SEN	686	221	Senegal
SC	SYC	690	248	Seychelles Islands
SL	SLE	694	232	Sierra Leone
SG	SGP	702	65	Singapore
SK	SVK	703	42	Slovakia (Slovak Republic)
SI	SVN	705		Slovenia
SB	SLB	090	677	Solomon Islands
SO	SOM	706		Somalia
ZA	ZAF	710	27	South Africa
GS	SGS	239		South Georgia And The South Sandwich Islands
ES	ESP	724	34	Spain
LK	LKA	144	94	Sri Lanka
SH	SHN	654		St. Helena
PM	SPM	666		St. Pierre And Miquelon
SD	SDN	736		Sudan
SR	SUR	740	597	Suriname
SJ	SJM	744		Svalbard And Jan Mayen Islands
SZ	SWZ	748	268	Swaziland
SE	SWE	752	46	Sweden
CH	CHE	756	41	Switzerland
SY	SYR	760	963	Syrian Arab Republic
TW	TWN	158	886	Taiwan, Province Of China
TJ	TJK	762		Tajikistan
TZ	TZA	834	255	Tanzania, United Republic Of
TH	THA	764	66	Thailand

TG	TGO	768	228	Togo
TK	TKL	772		Tokelau
TO	TON	776	676	Tonga
TT	TTO	780	809	Trinidad And Tobago
TN	TUN	788	216	Tunisia
TR	TUR	792	90	Turkey
TM	TKM	795		Turkmenistan
TC	TCA	796	809	Turks And Caicos Islands
TV	TUV	798		Tuvalu
UG	UGA	800	256	Uganda
UA	UKR	804		Ukraine
AE	ARE	784	971	United Arab Emirates
GB	GBR	826	44	United Kingdom
US	USA	840	1	United States
UM	UMI	581		United States Minor Outlying Islands
UY	URY	858	598	Uruguay
UZ	UZB	860		Uzbekistan
VU	VUT	548		Vanuatu
VA	VAT	336	39	Vatican City State (Holy See)
VE	VEN	862	58	Venezuela
VN	VNM	704		Viet Nam
VG	VGB	092		Virgin Islands (British)
VI	VIR	850		Virgin Islands (US)
WF	WLF	876		Wallis And Futuna Islands
EH	ESH	732		Western Sahara
YE	YEM	887	967	Yemen Arab Republic
YU	YUG	891	38	Yugoslavia
ZR	ZAR	180	243	Zaire
ZM	ZMB	894	260	Zambia
ZW	ZWE	716	263	Zimbabwe

ISO numbers are ISO 3166 Country Codes.



http://ourworld.compuserve.com/homepages/r_harvey



States

State	Capital	Year	Time	ZIP
<u>Alabama</u>	AL Montgomery	1819(22)	Ctrl.	350nn - 352nn, 354nn - 369nn
<u>Alaska</u>	AK Juneau	1959(49)	AK	995nn - 999nn
<u>Arizona</u>	AZ Phoenix	1912(48)	Mtn.	850nn, 852nn - 853nn, 855nn - 857nn, 859nn - 860nn, 863nn - 865nn
<u>Arkansas</u>	AR Little Rock	1836(25)	Ctrl.	716nn - 729nn
<u>California</u>	CA Sacramento	1850(31)	Pac.	900nn, 902nn - 908nn, 910nn - 928nn, 930nn - 961nn
<u>Colorado</u>	CO Denver	1876(38)	Mtn.	800nn - 816nn
<u>Connecticut</u>	CT Hartford	1788(5)	East	060nn - 069nn
<u>Delaware</u>	DE Dover	1787(1)	East	197nn - 199nn
<u>Florida</u>	FL Tallahassee	1845(27)	East	320nn - 340nn, 342nn, 344nn, 346nn - 347nn, 349nn
<u>Georgia</u>	GA Atlanta	1788(4)	East	300nn, 319nn, 399nn
<u>Hawaii</u>	HI Honolulu	1959(50)	AL	967nn - 968nn
<u>Idaho</u>	ID Boise	1890(43)	Mtn.	832nn - 838nn
<u>Illinois</u>	IL Springfield	1818(21)	Ctrl.	600nn - 607nn, 609nn - 620nn, 622nn - 629nn
<u>Indiana</u>	IN Indianapolis	1816(19)	East	460nn - 479nn
<u>Iowa</u>	IA Des Moines	1846(29)	Ctrl.	500nn - 528nn
<u>Kansas</u>	KS Topeka	1861(34)	Ctrl.	660nn - 662nn, 664nn - 679nn
<u>Kentucky</u>	KY Frankfort	1792(15)	East	400nn - 418nn, 420nn - 427nn
<u>Louisiana</u>	LA Baton Rouge	1812(18)	Ctrl.	700nn - 701nn, 703nn - 708nn, 710nn - 714nn
<u>Maine</u>	ME Augusta	1820(23)	East	040nn - 049nn
<u>Maryland</u>	MD Annapolis	1788(7)	East	206nn - 212nn, 214nn - 219nn
<u>Massachusetts</u>	MA Boston	1788(6)	East	010nn - 027nn, 055nn
<u>Michigan</u>	MI Lansing	1837(26)	East	480nn - 499nn
<u>Minnesota</u>	MN St. Paul	1858(32)	Ctrl.	550nn - 551nn, 553nn - 567nn
<u>Mississippi</u>	MS Jackson	1817(20)	Ctrl.	386nn - 397nn
<u>Missouri</u>	MO Jefferson City	1821(24)	Ctrl.	630nn - 631nn, 633nn - 641nn, 644nn - 658nn
<u>Montana</u>	MT Helena	1899(41)	Mtn.	590nn - 599nn
<u>Nebraska</u>	NE Lincoln	1867(37)	Ctrl.	680nn - 681nn, 683nn - 693nn
<u>Nevada</u>	NV Carson City	1864(36)	Pac.	889nn - 891nn, 893nn - 895nn, 897nn - 898nn
<u>New Hampshire</u>	NH Concord	1788(9)	East	030nn - 039nn
<u>New Jersey</u>	NJ Trenton	1787(3)	East	070nn - 089nn
<u>New Mexico</u>	NM Santa Fe	1912(47)	Mtn.	870nn - 875nn, 877nn - 884nn
<u>New York</u>	NY Albany	1788(11)	East	004nn - 005nn, 100nn - 149nn
<u>North Carolina</u>	NC Raleigh	1789(12)	East	270nn - 289nn
<u>North Dakota</u>	ND Bismarck	1889(39)	Ctrl.	580nn - 588nn
<u>Ohio</u>	OH Columbus	1803(17)	East	430nn - 459nn
<u>Oklahoma</u>	OK Oklahoma City	1907(46)	Ctrl.	730nn - 731nn, 734nn - 741nn, 743nn - 749nn
<u>Oregon</u>	OR Salem	1859(33)	Pac.	970nn - 979nn
<u>Pennsylvania</u>	PA Harrisburg	1787(2)	East	150nn - 196nn
<u>Rhode Island</u>	RI Providence	1790(13)	East	028nn - 029nn

<u>South Carolina</u>	SC	Columbia	1788(8)	East	290nn - 299nn
<u>South Dakota</u>	SD	Pierre	1889(40)	Ctrl.	570nn - 577nn
<u>Tennessee</u>	TN	Nashville	1796(16)	Ctrl.	370nn - 385nn
<u>Texas</u>	TX	Austin	1845(28)	Ctrl.	733nn, 750nn - 799nn, 885nn
<u>Utah</u>	UT	Salt Lake City	1896(45)	Mtn.	840nn - 847nn
<u>Vermont</u>	VT	Montpelier	1791(14)	East	050nn - 054nn, 056nn - 059nn
<u>Virginia</u>	VA	Virginia	1788(10)	East	220nn - 246nn
<u>Washington</u>	WA	Olympia	1889(42)	Pac.	980nn - 994nn
<u>West Virginia</u>	WV	Charleston	1863(35)	East	247nn - 268nn
<u>Wisconsin</u>	WI	Madison	1848(30)	Ctrl.	530nn - 532nn, 534nn - 535nn, 537nn - 549nn
<u>Wyoming</u>	WY	Cheyenne	1890(44)	Mtn.	820nn - 831nn

American Samoa	AS	Pago Pago	.	.	96799
Arm. Forces Americas	AA	APO Miami	.	.	34001 - 34099
Armed Forces Europe	AE	APO New York	.	.	090nn - 098nn
Armed Forces Pacific	AP	APO San Francisco	.	.	962nn - 965nn, 96201 - 96698, 966nn
<u>District of Columbia</u>	DC	.	1790	East	200nn, 202nn - 205nn
Federated Micronesia	FM	Kolonia (Pohnpei Isl.)	.	.	96941-96944
Guam	GU	Agana	.	+10	969nn
Marshall Islands	MH	Majuro	.	.	96960-96970
Northern Mariana Isl.	MP	Saipan	.	.	96950-96952
Palau Islands	PW	Koror	.	+9	96940
Puerto Rico	PR	San Juan	.	-4	006nn - 007nn, 009nn
US Virgin Islands	VI	Charlotte Amalie	.	.	008nn

Alberta	AB	Edmonton	.	Mtn.	
British Columbia	BC	Vancouver, Victoria	.	Pac.	
Manitoba	MB	Winnipeg	.	Ctrl.	
New Brunswick	NB	Fredericton	.		
Newfoundland	NF	St. John's	.	East	
Nova Scotia	NS	Halifax	.	-4	
Ontario	ON	Toronto	.	East	
Prince Edward Island	PE	Charlottetown	.		
Quebec	PQ	Quebec	.	East	
Saskatchewan	SK	Regina	.	Ctrl.	
Mexico	MX	Mexico City	.	.	

Year = Year admitted to union (order of admission to union).

Time = Time Zone

AK = Alaska (GMT - 9:00)

AL = Aleutian (GMT - 10:00)

Ctrl. = Central (GMT - 6:00)

East = Eastern (GMT - 5:00)

Mtn. = Mountain (GMT - 7:00)

Pac. = Pacific (GMT - 8:00)

ZIP = ZIP code range. Data is derived from "Domestic Mail Services, Exhibit 122.63" 12-20-92.

Click state names for additional information.



51,609 square miles (133,677 sq. km)
Motto: We Dare Defend Our Rights
Nicknames: Heart of Dixie; Camellia State

586,412 square miles (1,518,800 sq. km)
Motto: North to the Future
Nickname: The Last Frontier

113,909 square miles (295,024 sq. km)

Motto: *Diat Deus* (God Enriches)

Nicknames: Grand Canyon State; Copper State

53,104 square miles (137,539 sq. km)
Motto: *Regnat Populus* (The People Rule)
Nickname: Land of Opportunity

158,693 square miles (411,015 sq. km)
Motto: *Eureka* (I Have Found It)
Nickname: Golden State

104,247 square miles (270,000 sq. km)
Motto: *Nil sine numine* (Nothing Without Providence)
Nickname: Centennial State

5,009 square miles (12,973 sq. km)

Motto: *Qui transtulit sustinet* (He Who Transplanted Still Sustains)

Nicknames: Constitution State; Nutmeg State

2,057 square miles (5,328 sq. km)
Motto: Liberty and Independence
Nicknames: First State; Diamond State

58,560 square miles (151,670 sq. km)
Motto: In God We Trust
Nickname: Sunshine State

58,876 square miles (152,489 sq. km)
Motto: Wisdom, Justice, and Moderation
Nickname: Empire State of the South

6,450 square miles (16,706 sq. km)

Motto: The Life of the Land is Perpetuated in Righteousness

Nickname: Aloha State

83,557 square miles (216,413 sq. km)
Motto: *Esto perpetua* (It is perpetual)
Nickname: Gem State

56,400 square miles (146,076 sq. km)

Motto: State sovereignty—National Union

Nicknames: Land of Lincoln; Inland Empire; Prairie State

36,291 square miles (93,994 sq. km)
Motto: Crossroads of America
Nickname: Hoosier State

56,290 square miles (145,791 sq. km)

Motto: Our Liberties We Prize and Our Rights We Will Maintain

Nickname: Hawkeye State

82,264 square miles (213,064 sq. km)

Motto: *Ad astra per aspera* (To the Stars Through Difficulties)

Nickname: Sunflower State

40,395 square miles (104,623 sq. km)
Motto: United We Stand, Divided We Fall
Nickname: Bluegrass State

48,523 square miles (125,675 sq. km)
Motto: Union, Justice and Confidence
Nickname: Pelican State

33,215 square miles (86,027 sq. km)
Motto: *Dirigo* (I Direct)
Nickname: Pine Tree State

10,577 square miles (27,394 sq. km)

Motto: ...*Fatti maschii, parole femine* (Manly Deeds, Womanly Words)

Nicknames: Old Line State; Free State

8,257 square miles (21,386 sq. km)

Motto: *Ense petit placidam sub liberate quietem* (By The Sword We Seek Peace, But Peace Only Under Liberty)

Nicknames: Bay State; Colony State

58,216 square miles (150,779 sq. km)

Motto: *Si quaeris peninsulam amoenam circumspice* (If you seek a pleasant Peninsula, look about you)

Nicknames: Wolverine State; Great Lake State

84,068 square miles (217,736 sq. km)

Motto: *L'Etoile du nord* (Star of the North)

Nicknames: North Star State; Gopher State

47,716 square miles (123,584 sq. km)

Motto: *Virtute et armis* (By Valor and Arms)

Nickname: Magnolia State

69,686 square miles (180,487 sq. km)

Motto: *Salus populi suprema lex esto* (The Welfare of The People Shall be the Supreme Law)

Nickname: Show-Me State

147,138 square miles (381,087 sq. km)
Motto: *Oro y plata* (Gold and Silver)
Nickname: Treasure State

77,227 square miles (200,018 sq. km)
Motto: Equality Before the Law
Nickname: Cornhusker State

110,540 square miles (286,299 sq. km)

Motto: All for Our Country

Nicknames: Silver State; Sagebrush State; Battle-Born State

9,304 square miles (24,097 sq. km)
Motto: Live free or die
Nickname: Granite State

7,836 square miles (20,295 sq. km)
Motto: Liberty and prosperity
Nickname: Garden State

121,666 square miles (315,115 sq. km)

Motto: *Crescit eundo* (It Grows as It Goes)

Nickname: Land of Enchantment

49,576 square miles (128,402 sq. km)
Motto: Excelsior (Ever upward)
Nickname: Empire State

52,586 square miles (136,198 sq. km)
Motto: *Esse quam videri* (To be rather than to seem)
Nicknames: Tar Heel State; Old North State

70,665 square miles (183,022 sq. km)

Motto: Liberty and union, now and forever, one and inseparable

Nicknames: Sioux State; Flickertail State; Peace Garden State

41,222 square miles (106,765 sq. km)
Motto: With God, All Things Are Possible
Nickname: Buckeye State

69,919 square miles (181,090 sq. km)

Motto: *Labor omnia vincit* (Labor Conquers All Things)

Nickname: Sooner State

96,981 square miles (251,181 sq. km)
Motto: The Union
Nickname: Beaver State

45,333 square miles (117,412 sq. km)
Motto: Virtue, Liberty and Independence
Nickname: Keystone State

1,214 square miles (3,144 sq. km)

Motto: Hope

Nicknames: Little Rhody; Ocean State

31,055 square miles (80,432 sq. km)

Motto: *Dum spiro spero* (While I breathe, I hope)

Nickname: Palmetto State

77,047 square miles (199,552 sq. km)
Motto: Under God, the People Rule
Nicknames: Coyote State; Sunshine State

42,244 square miles (109,412 sq. km)
Motto: Agriculture and Commerce
Nickname: Volunteer State

267,338 square miles (692,405 sq. km)
Motto: Friendship
Nickname: Lone Star State

84,916 square miles (219,932 sq. km)
Motto: Industry
Nickname: Beehive State

9,609 square miles (24,887 sq. km)
Motto: Freedom and Unity
Nickname: Green Mountain State

40,817 square miles (105,716 sq. km)
Motto: *Sic semper tyrannis* (Thus Always to Tyrants)
Nickname: Old Dominion

68,192 square miles (176,617 sq. km)
Motto: *Alki* (By and by)
Nickname: Evergreen State

24,181 square miles (62,629 sq. km)

Motto: *Montani semper liberi* (Mountaineers are Always Free)

Nickname: Mountain State

56,154 square miles (145,439 sq. km)
Motto: Forward
Nickname: Badger State

97,914 square miles (253,597 sq. km)
Motto: Equal Rights
Nickname: Equality State

70 square miles (180 sq. km)
Motto: *Justitia Omnibus* (Justice for All)
Nickname: Capital City

January 24, 1999



6.3

Copyright ©1999 R. E. Harvey, All rights reserved.

P. O. Box 5695

Glendale AZ 85312, USA

• For the latest release, visit the home page:

http://ourworld.compuserve.com/homepages/r_harvey

Notes


'... and what is the use of a book,' thought Alice 'without pictures or conversation?'
- *Alice in Wonderland*, Lewis Carroll

Thank you for using this book. You may continue to use this book as long as you like without charge, if you agree to pop-in to the home page every now and again to look for new stuff. That is your fee—you must stop by again.

If anybody asks you for a copy of this help file, please tell them to visit the home page and get their own, thank you. Besides, they're likely to get a later, better version than the one you have if they go get their own. And while they're at the home page, they'll probably find something very cool that they really can't live without.

- This book is frequently updated. Stop by the home page now and again to get the latest edition. Select Help, "About ASCIIcat..." to see the publication date. If it's a few months old, stop by for an updated release. The release version number is for your convenience; whole-number updates mark major enhancements, fractional updates are small additions or corrections.
- You can browse through this book page-by-page by pressing the < and > keys on the keyboard or the << and >> buttons at the top of the page. Click the > icon in the top-left corner of each page for the pop-up Contents list.
- Click the big blue [a](#) at the top of the page to see a pop-up ANSI character chart. Calculate any character code by adding the value in the left to the value at the top of the column. For example, the letter H is in the 70 row in the 2 column, which totals 72.
- This is high-density information. Lists serve several purposes—there are only as many pages as necessary. These lists are designed to be viewed in a narrow window. Scrunch it up, leave it on the screen, and switch to it at a moment's notice.
- See [ASCII.CAT.TXT](#) for additional information.
- If you like this book, it would be nice if you would send a postcard or letter to suggest additions and to say thanks. Paper is much more appreciated than e-mail.
- The rabbit-like icon is a three-dimensional representation of an Esquilax. An Esquilax is a legendary horse, with the head of a rabbit, and the body of a rabbit. The running Esquilax has been our logo since 1983.

Content Notes

- Percentages in [Character Converter](#) are helpful in converting colors between HTML (RGB hex-triplet) and graphic program displays. Web-safe 212 colors use color values of 0% (0x00), 20% (0x33), 40% (0x66), 60% (0x99), 80% (0xCC) and 100% (0xFF). Most fonts do not support characters 0-31.
- Codepage 437 and 850 character sets are emulated using ANSI characters, the Symbol font, and pictures. The Symbol and Wingdings fonts are furnished with Windows 3.1 and later.
- ANSI characters 145-146 were added in Windows 3.0 Other characters 130-159 were added in Windows 3.1.
-  The Euro currency symbol, at character position 128, is available in standard fonts supplied with Windows 98, Windows NT 5, and later operating systems. Supported by Codepage 874, 1250, 1252, 1254, 1255, 1256, 1257, 1258. Codepage 1251 places the Euro symbol at character position 136.

- DOS line drawing characters, shown on the [Fonts & Pixels](#) page, are supported by most DOS character sets. For compatibility with more Codepages, use only single- or double-line boxes (the two leftmost illustrations). Avoid the mixed single- and double-line box characters.
 - The height of a font is the point size plus spacing between lines. Called *leading* (pronounced ledding, after the metal bits made of lead that typesetters used to place between lines of text), this extra space keeps lines of text from running-together. Most word processors add leading of approximately 20-percent of the font height. For instance, a 10-point font usually has two points of leading.
- On the [Font Information](#) page, click the yellow boxes to see pop-up descriptions.
- For Windows color programming and illustrating, stick with [Windows Colors](#) for smooth reproduction on any display. Each of these colors can be smoothly dithered from just two of the standard 16 Windows colors. For compatibility, use only these colors in WMF (Windows meta-files). View that page in 16- or 256-color mode to see the effect of dithering. Note that some similar-looking colors not in this list may be displayed as gray or pure colors—be careful with other colors! These are Windows-compatible colors, not Internet colors. See [HTMLcat](#) for swatches of Web-safe colors.
- For Macintosh help file compatibility, avoid using non-ANSI characters or any characters on the [Character Sets](#) page that are highlighted in a different color.
- The [Elements of Style](#) page is based on the 1918 edition, by William Strunk, Jr. The book is all on one page; click a topic to see the text. For simplicity, we have converted some topics into multiple sub-topics. Two outdated chapters have been removed; see [Words](#) for current information.
- See FileExt.hlp, available from the home page, for descriptions of hundreds and hundreds of file types and file name extensions.
- The Windows 3.1 help viewer recognizes Courier, Courier New, Helv, MS Sans Serif, MS Serif, Arial, Symbol, Times New Roman, and Tms Rmn. Any other fonts are shown as the default font. You can use other fonts in help files, such as we have done in this help file, but they display correctly only in later help viewers.
- Help compiler versions earlier than 4.0 don't recognize the RTF mnemonics that Word for Windows uses for characters 145-151, so those characters are ignored.
- Except where noted, all data was compiled by the author. You may not reuse this data for any purpose.

This book is called ASCIIcat because it was originally primarily a character conversion table. Named for [ASCII](#); the Cat means that it is one of our online reference catalogs, like [HTMLcat](#). HTMLcat is an extensive reference of HTML information.

Web site

http://ourworld.compuserve.com/homepages/r_harvey

While you're at the web site, try HTMLcat. Take ASCIIcat, multiply it by 200, add a year of development, and make it just about HTML and styles. That's what you will find in HTMLcat.

HTMLcat is an extensive reference of HTML tags and a tutorial about writing Internet documents. Incredibly complete and *fun* to use.

- Written for designers and writers, not just for computer programmers. It's for professionals who

want to create attractive, useful, intelligible documents.

- Designed for quick, flexible navigation. A catalog with several ways to browse. Simple, logical, sequential design.
- Topics are arranged consistently, beginning with simple descriptions and increasing levels of detail.
- Just as many words as necessary—no more, no fewer. We're offering ideas, not words.
- Icons with pop-up lists of related topics.
- Documents 126 common and uncommon HTML tags.
- Describes 132 style attributes.
- More than 2,600 graphics and illustrations.
- Topic links, cross-references, and more links—more than 7,000 hyper-links—guide you between topics.
- Tons of tips about compatibility, which tags to use (and which to avoid), and for getting the most from the simplest documents.
- Faster and easier to use one Windows help file to look-up HTML information than to search giant HTML files or outdated ink-on-paper books.
- Tutorials about writing HTML documents, graphics, fonts, style sheets.
- Complete HTML color swatches—with color names and color values. Click a color to copy the HTML codes for the color to the Windows Clipboard.
- High-resolution, high-quality vector drawing illustrations.
- Context-sensitive pop-up topic lists. You'll have to try this to see how easy it is to navigate through hundreds of links with one small dialog box.
- Pop-up lists. Special characters, boilerplate HTML codes, and URL addresses.
- Click an HTML example or URL to copy it to the Clipboard.
- Example documents and cascading style sheets.
- HTMLcat is the only Windows help file that does multiple windows correctly. No windows jumping around and popping-up in unexpected places.
- Efficient design results in a surprisingly small book.
- It's a CD-ROM worth of reference without the CD. It's a virtual 900 page coffee table book.

HTMLcat is the coolest way to wend your way through this tenebrous task. It would be impossible to duplicate this usability on paper. Even if you don't care about HTML, have a look at HTMLcat to see how Windows Help files should work. It's one of the most original, innovative, and ambitious help files ever written.

Download HTMLcat

http://ourworld.compuserve.com/homepages/r_harvey/htmlcat.htm

Copyright ©1999 R. E. Harvey, All rights reserved.

Help Tips



This book doesn't look like other help files or programs. It doesn't want to. Shrink it down to a few inches wide, move it over to one side of the screen, and keep it running while you work. Whenever you need information, press **ALT+TAB** to find the book, then use the many navigation aids to find what you need.

The first page you will see when you open this book is the Character Converter; this is the most popular page in the book. Wherever you are, the Contents button returns you to the main table of contents.

- The Back button returns to the previous topic you have visited. The help viewer remembers up to 40 topics, so click the Back button one or more times if you have followed several links and want to find your way back to the original topic.
- In Windows 3.1, the History button pops-up a separate window listing help topics you have recently visited. In other versions of Windows, the History window is available from the Options menu.

Keyboard shortcuts

>	Move to the next page.
<	Move to the previous page.
B	Like the Back button, back-up one page in the <u>H</u> istory list.
C	Like the Contents button. Return to the table of contents.
S	Like the Search button. Open the <u>S</u> earch (index) window.
TAB	Move to the next link on the current page.
SHIFT+TAB	Move to the previous link on the current page.
ENTER	Jump to the selected link. If no link is selected, open the context-sensitive link list.
Esc	Close a window. If no other windows are open, close the help file.
Down	Scroll down the current page.
Up	Scroll up the current page.
PgDn	Move down one screen-full on the current page.
PgUp	Move up one screen-full on the current page.
Left	Scroll the window left. Only required if the page is too wide to fit in the window.
Right	Scroll the window right. Only required if the page is too wide to fit in the window.

The following navigation aids are available when viewing this help file:

H	Open or switch to the <u>H</u> istory window. Press Esc to close the window and return to this help file.
SPACEBAR	Move to the next page. Same as >> .
CTRL+PgUP	Move to the previous page. Same as << .
CTRL+PgDn	Move to the next page. Same as >> .
BACKSPACE	Move to the previous page. Same as B .

Other help files by us follow these keyboard conventions.

Document links

Links to topics are underlined, usually displayed in green. Click these keywords to jump to the underlined topic.

Links to pop-ups have dotted underlines. Click these items to pop-up a small box containing a list of

related topics or a definition. When you click the mouse outside of the pop-up window, the original topic is still on the screen.

Underlined links in blue text open other documents.



Copyright

Notice

Intellectual property is a possession, much like any other property. By receipt of these materials the user agrees to abide by applicable copyright laws. Without support of copyright laws, there would be little incentive to create new products. Unauthorized copying of computer software is a felony, punishable by fines of up to \$250,000 and prison terms of up to five years.

No part of this publication may be stored in retrieval systems, transmitted, or reproduced in any way, including but not limited to photocopy, photography, magnetism or other recording method without express permission of Richard E. Harvey.

Information in this document is subject to change. The software described in this document is furnished under a license agreement. The software may be used or copied only in accordance with the terms of that agreement. It is against the law to copy this software on magnetic tape, disk or other medium for any purpose other than the purchaser's personal use, except as specifically described in the license agreement.

There is no warranty implied or stated for accuracy or suitability for any purpose.

This product is proprietary intellectual property, protected by United States and international copyright. Do not alter or remove any copyright, authorship, or any other notices. Do not re-distribute these materials or any materials derived in any way from book, by any means, electronic, printed or otherwise. Do not share copies of this help file.

No charge may be made for this book beyond standard Internet connect charges.

Payment



Thank you for using this book. This is not free software. You may continue to use this book as long as you like without charge, if you agree to pop-in to the home page every now and again to look for new stuff. That is your fee—you must stop by again. It would be nice if you would send a postcard to say thanks or to suggest additions, too.

If anybody asks you for a copy of this help file, please tell them to visit the home page and get their own, thank you. Besides, they're likely to get a later, better version than the one you have if they go get their own. And while they're at the home page, they'll probably find something very cool that they really can't live without.

Web site

http://ourworld.compuserve.com/homepages/r_harvey

Copyright ©1999 R. E. Harvey, All rights reserved.

P. O. Box 5695


Glendale AZ 85312, USA

Email: r_harvey@compuserve.com

ASCII

Acronym for American Standard Code for Information Interchange. ASCII codes use an 8-bit value to represent characters. The Standard ASCII character set uses the first 128 values (0-127). The characters represented by high-order numbers (128-255) are dependent on the computer type; for IBM-PC compatibles, these are called PC-8 or code page 437 (English). In Windows, a common character set is ISO-1250, or often simply called ANSI.

ANSI Characters

	0	1	2	3	4	5	6	7	8	9
30			spc	!	"	#	\$	%	&	'
40	()	*	+	,	-	.	/	0	1
50	2	3	4	5	6	7	8	9	:	;
60	<	=	>	?	@	A	B	C	D	E
70	F	G	H	I	J	K	L	M	N	O
80	P	Q	R	S	T	U	V	W	X	Y
90	Z	[\]	^	_	`	a	b	c
100	d	e	f	g	h	i	j	k	l	m
110	n	o	p	q	r	s	t	u	v	w
120	x	y	z	{		}	~		€	□
130	,	f	„	…	†	‡	ˆ	‰	Š	<
140	Œ	□	Ž	□	□	·	,	“	”	•
150	-	—	˜	™	š	>	œ	□	ž	ÿ
160		ı	¢	£	¤	¥	¦	§	¨	©
170	ª	«	¬	®	¯	°	±	²	³	
180	´	µ	¶	·	¸	¹	º	»	¼	½
190	¾	¿	À	Á	Â	Ã	Ä	Å	Æ	Ç
200	È	É	Ê	Ë	Ì	Í	Î	Ï	Ð	Ñ
210	Ò	Ó	Ô	Õ	Ö	×	Ø	Ù	Ú	Û
220	Ü	Ý	Þ	ß	à	á	â	ã	ä	å
230	æ	ç	è	é	ê	ë	ì	í	î	ï
240	ð	ñ	ò	ó	ô	õ	ö	÷	ø	ù
250	ú	û	ü	ý	þ	ÿ				



[Calculator](#)

[Calendar](#)

[Character Converter](#)

[Character Sets](#)

[Codepages](#)

[Color: Windows](#)

[Color: DOS](#)

[Copyright](#)

[Countries](#)

[DOS Line Characters](#)

[Elements of Style](#)

[Font Information](#)

[Fractions](#)

[Help Tips](#)

[Notes](#)

[Key Codes: DOS](#)

[Key Codes: Windows](#)

[Paper Sizes](#)

[Pixels & Points](#)

[Resolution Converter](#)

[Roman Numerals](#)

[Screen Ruler](#)

[States](#)

[Table of Contents](#)

[Temperatures](#)

[Units](#)

[Unit Conversions](#)

[Words](#)

