The TEX ruler

This is the TEX ruler, a measuring device for typographical designers working with TEX. It includes ordinary rulers in inches, centimeters, and picas. It can be used to measure font sizes, baseline distances, and rule weights. The design is based on a ruler by Inge Eijkhout, implementation in TEX is by Victor Eijkhout.

The TEX ruler is shareware: you can give it away, but you are not allowed to ask money for it, regardless of the medium you use. You are not allowed to cut this manual page from the source, dvi, or postscript file. If you want to show your appreciation, send a contribution to the address below.

How to format and print this file

This file will give you three pages. Most likely the second one cannot be handled by your printer, but I've included it for completeness. At the top of the source file, 3 fonts are declared. Please change the CM fonts to something more pretty, eg Helvetica.

How to use the TEX ruler

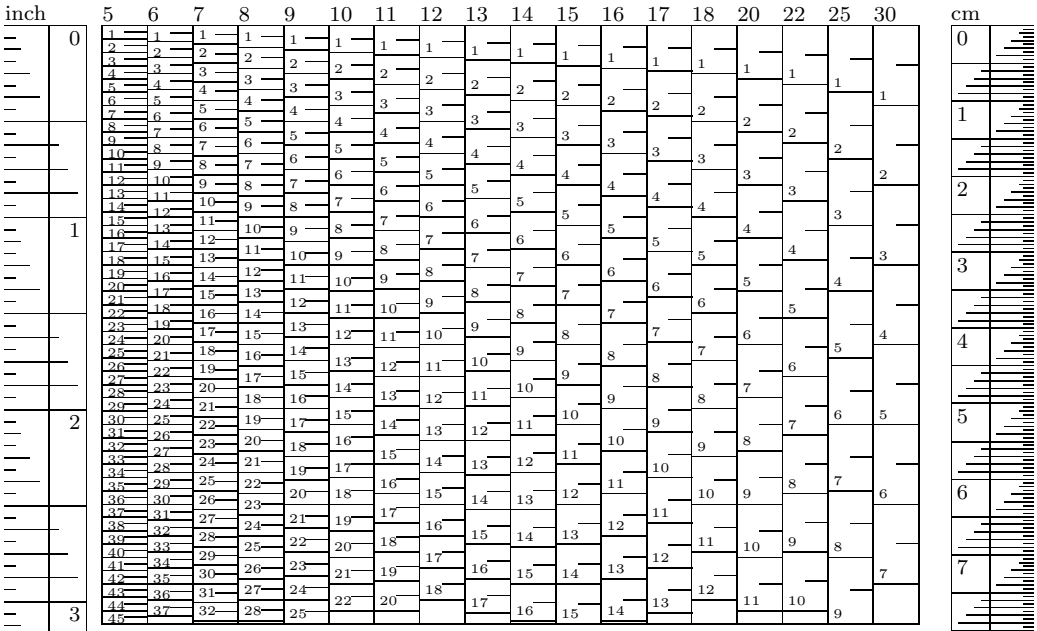
Rulers. Use them like ordinary rulers. It is suggested that you print the TEX ruler on transparent plastic and cut the edges along the rulers.

Baseline distances. Put the top line along the baseline of some line of text. Then see in what column the other lines of text line up.

Font sizes: cap height. Take an uppercase letter such as 'K' or 'H'. Find the line with its font name, or use the first line. See what box on that line it fits in best, with the character completely between the lines. Read out the magnification and size of the font. Alternately check on all lines which box fits best, then read out the size.

General remark: all lines have a width of .05 millimeter. This is less than the dot width of a 300dpi laser printer, so beware of some inaccuracies. Also your printer driver may introduce inaccuracies.

Victor Eijkhout
Department of Mathematics
University of California
Los Angeles, CA 90024
USA



Baseline distances

Cap heights

cmr10 cmbx10 cmss10 cmmi10	0	half	1	2	3	4	5
	2.44	2.67	2.93	3.51	4.22	5.06	6.07
magstep							
mm							
	10	10.95	12	14.4	17.28	20.74	24.88
point size							

cmtt10 cmff10	0	half	1	2	3	4	5
	2.14	2.35	2.57	3.09	3.71	4.45	5.34
magstep							
mm							
	10	10.95	12	14.4	17.28	20.74	24.88
point size							

cmr7 cmbx7 cmmi7	0	half	1	2	3	4	5
	1.70	1.86	2.04	2.45	2.94	3.54	4.24
magstep							
mm							
	7	7.67	8.4	10.08	12.10	14.52	17.42
point size							

cmr5 cmbx5 cmmi5	0	half	1	2	3	4	5
	1.21	1.33	1.46	1.75	2.10	2.52	3.03
magstep							
mm							
	5	5.48	6	7.2	8.64	10.37	12.44
point size							

	5	6	7	8	9	10	11	12	13	14
	1.22	1.46	1.70	1.95	2.19	2.44	2.68	2.93	3.17	3.41
point size										
mm										

	15	16	17	18	19	20	21	22	23	24
	3.66	3.90	4.15	4.39	4.64	4.88	5.12	5.37	5.61	5.86
point size										
mm										

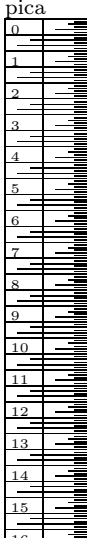
	26	28	30	32	34	36	38	40	42	44
	6.34	6.83	7.32	7.81	8.30	8.79	9.28	9.76	10.25	10.74
point size										
mm										

	46	48	50	52	54	56	58	60	62	64
	11.23	11.72	12.21	12.69	13.18	13.67	14.16	14.65	15.14	15.63
point size										
mm										

Rule weights

mm		pt
0.05	1.00	0.5
0.10	1.25	1.0
0.15	1.50	1.5
0.20	1.75	2.0
0.25	2.00	2.5
0.30	2.25	3.0
0.35	2.50	3.5
0.40	2.75	4.0
0.45	3.00	4.5
0.50	3.25	5.0
0.55	3.50	5.5
0.60	3.75	6.0
0.65	4.00	6.5
0.70	4.25	7.0
0.75	4.50	7.5
0.80	4.75	8.0
0.85	5.00	8.5
0.90		9.0
0.95		9.5
		10.0
		10.5
		11.0
		11.5
		12.0
		12.5

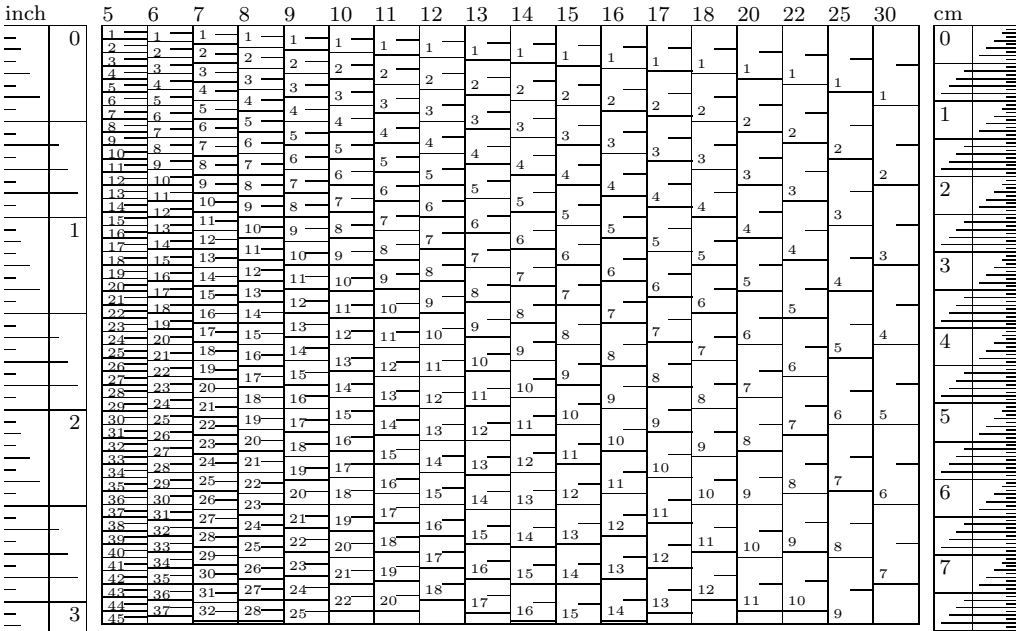
pica



Conversion of units

1in = 72.27 pt
1in = 72 bp
1in = 25.4 mm
1157dd = 1238 pt
1pt = 65536 sp

	pt	pc	dd	cc	bp	mm	in
pt	1	.0833				.351	.0138
pc	12	1				4.218	.166
dd			1	.0833		.376	.0148
cc			12	1		4.513	.1777
bp					1	.383	.0139
mm	2.845	.237	2.659	.222	2.835	1	.0394
in	72.27	6.0225	67.54	5.628	72	25.4	1

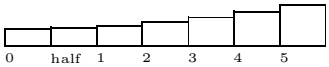


Baseline distances

Cap heights

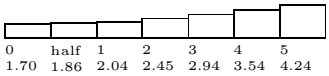
0	half	1	2	3	4	5	magstep
2.44	2.67	2.93	3.51	4.22	5.06	6.07	mm
10	10.95	12	14.4	17.28	20.74	24.88	point size

cmr10 cmbx10 cmss10 cmmi10



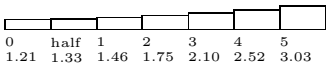
0	half	1	2	3	4	5	magstep
2.14	2.35	2.57	3.09	3.71	4.45	5.34	mm
10	10.95	12	14.4	17.28	20.74	24.88	point size

cmtt10 cmff10



0	half	1	2	3	4	5	magstep
1.70	1.86	2.04	2.45	2.94	3.54	4.24	mm
7	7.67	8.4	10.08	12.10	14.52	17.42	point size

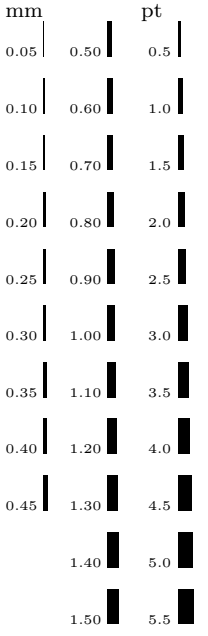
cmr7 cmbx7 cmmi7



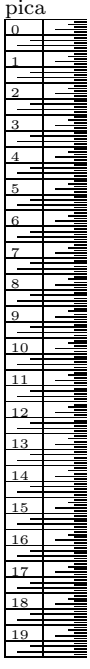
0	half	1	2	3	4	5	magstep
1.21	1.33	1.46	1.75	2.10	2.52	3.03	mm
5	5.48	6	7.2	8.64	10.37	12.44	point size

cmr5 cmbx5 cmmi5

Rule weights



pica



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pc	12	1				4.218	.166
dd			1	.0833		.376	.0148
cc			12	1		4.513	.1777
bp					1	.383	.0139
mm	2.845	.237	2.659	.222	2.835	1	.0394
in	72.27	6.0225	67.54	5.628	72	25.4	1

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Design: Inge and Victor Eijkhout 1990–96