

## MS-Word File with Mathematical Symbols

First I give a list of symbols for both MS-Word and Powerpoint. Then I explain how to get summation and integration, how to put one thing above another, and, finally, how to make fractions, for MS-Word. For Powerpoint, the latter things don't seem to work.

In the following list of symbols, each line contains:

- (1) A symbol;
- (2) the abbreviation of the symbol that I use in the autotext function of MS Word;
- (3) the font required to reproduce the symbol.

My abbreviation ga means "greek alpha;" etc. I use the same abbreviations for every new wordprocessor again (LaTeX, Wordperfect, ...). Memorizing the abbreviations was, therefore, a once-in-a-lifetime investment. Of course, you will choose your abbreviations as you like them best.

$\alpha$ : ga (symbol)

$\beta$ : gb (symbol)

$\gamma$ : gg (symbol)

$\Gamma$ : ggg (symbol)

$\chi$ : chi (symbol)

$\delta$ : gd (symbol)

$\Delta$ : gdd (symbol)

$\epsilon$ : ge (symbol)

$\varnothing$ : gf (symbol)

$\Phi$ : gff (symbol)

$\phi$ : phi (symbol)

$\theta$ : theta (symbol)

$\Theta$ : ttheta (symbol)

$\eta$ : eta (symbol)

$\zeta$ : zeta (symbol)

$\iota$ : gi (symbol)

$\kappa$ : gk (symbol)

$\lambda$ : gl (symbol)

$\mu$ : gm (symbol)

$\nu$ : gn (symbol)

$\pi$ : gp (symbol)

$\Pi$ : gpp (symbol)

$\psi$ : psi (symbol)

$\Psi$ : ppsi (symbol)

$\rho$ : gr (symbol)

$\sigma$ : gs (symbol)

$\Sigma$ : gss (symbol)

$\tau$ : gt (symbol)

$T$ : gtt (symbol)

$\omega$ : gw (symbol)

$\Omega$ : gww (symbol)

$\theta$ : theta (symbol)

$\xi$ : xi (symbol)

$\forall$ : fa (symbol)

$\exists$ : exist (symbol)

$\ni$ : rin (symbol)

$-$ : - (symbol)

$\leq$ :  $\leq$  (symbol)

$\geq$ :  $\geq$  (symbol)

$\infty$ : iy (symbol)

$\rightarrow$ : ra (symbol)

$\leftarrow$ : la (symbol)

$\leftrightarrow$ : lra (symbol)

$\uparrow$ : arrowup (symbol)

$\downarrow$ : arrowdn (symbol)

$\times$ : times (symbol)

$\Sigma$ : sumsimple (symbol)

$\emptyset$ : ey (symbol)

$\cap$ : cap (symbol)

$\cup$ : cup (symbol)

$\supset$ : sps (symbol)

$\subset$ : sbs (symbol)

$\in$ : in (symbol)

$\notin$ : nin (symbol)

$\neq$ : neq (symbol)

$\sqrt{\quad}$ : sqrt (symbol)

$\Leftrightarrow$ : llra (symbol)

$\Leftarrow$ : lla (symbol)

$\Rightarrow$ : rra (symbol)

$\Uparrow$ : aarrowup (symbol)

$\Downarrow$ : arrowdn (symbol)

$\bullet$ : bd (symbol)

$\vee$ : ve (symbol)

$\wedge$ : wedge (symbol)

$\mathbb{R}$ : re (Math5)

$\mathbb{Q}$ : nq (Math5)

$\mathbb{N}$ : na (Math5)

$\mathbb{Z}$ : nz (Math5)

$\circ$ : cir (Math3)

$\square$ : ep (Math3); this should really be a white square.

$\mapsto$ : mo (Math4)

$\ell$ : el (MT-extra, enlarged to 14)

$\mathcal{A}$ : sa (EUSM7)

ℬ: sb (EUSM7)

℄: sc (EUSM7)

℄: sd (EUSM7)

℄: se (EUSM7)

℄: sf (EUSM7)

℄: sg (EUSM7)

℄: sh (EUSM7)

≧: Math3 (p)

≧: Math3 (sp)

≧: Math3 (rp)

<: Math3 (srp)

: euro

∫: int (Times New Roman enlarged to 14; for adding sub- and superscript, see end of file.)

†: dead Times New Roman enlarged to 14

½: half

¼: onequarter

¾: threequarter

⅓: onethird (Booksheld Symbol 4)

⅔: twothirds (Booksheld Symbol 4)

⅛:

⅜:

⅝:

⅞:

⅕: onefifth (Booksheld Symbol 4)

⅔: twofifth (Booksheld Symbol 4)

If you need other symbols, not given here, then you may find them by going to Insert, Symbol. Then choose a font (I always start with the Symbol font), search there for the symbol you need, try other fonts if the first one did not have the symbol you need, etc.

The following super-imposition of sub- and superscript works only for MS Word, not for Powerpoint. It can, obviously, be used for the integration symbol as well. Which of the following two comes out best depends on settings in your computer. (For specialists: it depends on whether the list separator is a comma or semicolon. The list separator can be adjusted in [My-Computer/Control-Panel-Configuration-Regional Setting/options-Number], or in [My-Computer/Control-Panel/Date,Time,Language,and-Regional-Options/format-of-numbers,dates-and-times/customize/list-separator].) Choose what works properly for you. Pressing the function key ALT F9 several times on your computer while in MS-Word, sometimes showing things such as "{Eq \o .....", will show when you can change the sub- and superscripts. It is when you see things like "{Eq ..." etc.

$\sum_{j=1}^n$ : sum (symbol)

$\sum_{j=1}^n$  : sum (symbol)

The \o command used in the above summation (visible if you do ALT F9 a few times) serves to put one thing on top of the other. It can also be used, for example, to produce bars above things (only in Word, not in Powerpoint). An example, where it depends again on the configuration of your computer what of the following two comes out well, is as follows.

$\bar{x}$  bar

$\bar{,x}$  bar

Unfortunately, I do not know an efficient manner to get the bar well positioned. I manoeuvre some, after ALT F9, with reduced spaces before and after the hyphen, enlarging or reducing the bar, and putting the bar higher or lower through fO $\underline{r}$ mat, F $\underline{o}$ nt, cha $\underline{R}$ acter spacing, and then  $\underline{P}$ osition Raised or Lowered to a sufficient degree.

Fractions can be obtained as follows:

numerator  
denominator

**Error!**

As before, one of these two lines gives a fraction on your screen, and the other not. Choose what works well on your screen. To substitute the numerator and denominator that you want, do ALT F9, then replace numerator and denominator by what you want, and then do ALT F9 again.