The graphpap package*

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\texttt{graphpaper}[(N)]((X,Y))((DX,DY)) Makes a grid with left-hand corner at
((X,Y)), extending ((DX,DY)) units in the X and Y directions, where the lines
are $N$ units apart. Every fifth line is thick and is numbered. The default value of
$N$ is 10. The arguments must all be integers.

First, we define three counters. The first two are defined as raw TeX counters
since multiplication and division must be performed in them.

\begin{verbatim}
\newcount@gridx% now (@tempcnta)
\newcount@gridy% now (@tempcntb)
\newcounter{@grid}
\let\c@@grid\count@
\end{verbatim}

Next we define the following commands to draw vertical and horizontal grids.
The “nonum” commands just draw the grids; the other commands also print
numbers. All the arguments must be integers.

VERTICAL GRIDS
\\texttt{vgrid}((xpos,ypos))((xincrement))
\texttt{vgridnumber}((xincrement))
\texttt{nonumvgrid}((xpos,ypos))((xincrement))
\texttt{nonumvgridnumber}((xincrement))

HORIZONTAL GRIDS
\\texttt{hgrid}((xpos,ypos))((yincrement))
\\texttt{nonuhgrid}((yincrement))
\\texttt{nonuhgridnumber}((yincrement))

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\begin{verbatim}
14 \def\nonumvgrid(#1,#2)#3#4#5{\% 
15 \multiput(#1,#2)(#3,0){#4}{\line(0,1){#5}}}
16 \def\hgrid(#1,#2)#3#4#5{\% 
17 \setcounter{@grid}{#2}\% 
18 \multiput(#1,#2)(0,#3){#4}{\line(1,0){#5}}\% 
19 \multiput(#1,#2)(0,#3){#4}{\@hgridnumber{#3}}\% 
20 \def\@hgridnumber#1{\% 
21 \makebox(0,0)[r]{\arabic{@grid}\hspace{10pt}}\% 
22 \addtocounter{@grid}{#1}\% 
23 \def\nonumhgrid(#1,#2)#3#4#5{\% 
24 \multiput(#1,#2)(0,#3){#4}{\line(1,0){#5}}\% 
25 Finally, \texttt{\graphpaper} is defined in a straightforward way in terms of the commands above.
26 \begin{verbatim}
25 \newcommand\graphpaper[1][10]{\leavevmode\@grid{#1}}
26 \@grid
27 \def\@grid#1(#2,#3)#4{\@grid@i{#1}{#2}{#3}(}
28 \@grid@i
29 \def\@grid@i#1#2#3(#4,#5){\% 
30 \@tempcnta=#4\relax 
31 \divide\@tempcnta#1\relax 
32 \advance\@tempcnta1\relax 
33 {\thinlines\@nonumvgrid(#2,#3){#1}{\@tempcnta}{#5} \@tempcnta#4\relax 
34 \divide\@tempcnta5\relax 
35 \divide\@tempcnta#1\relax 
36 \@tempcntb5\relax 
37 \multiply\@tempcntb1\relax 
38 \@thicklines\@vgrid(#2,#3){\@tempcntb}{\@tempcnta}{#5} \@tempcnta#5\relax 
39 \divide\@tempcntb #1\relax 
40 \divide\@tempcntb\relax 
41 \@thicklines\@nonumhgrid(#2,#3){#1}{\@tempcnta}{#4} \@tempcnta#5\relax 
42 \divide\@tempcntb\relax 
43 \@thicklines\@hgrid(#2,#3){\@tempcntb}{\@tempcnta}{#4}\% 
44 \@ignorespaces}
45 //package
\end{verbatim}
\end{verbatim}

Finally, \texttt{\graphpaper} is defined in a straightforward way in terms of the commands above.