The morefloats package

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Abstract

The default limit of unprocessed floats, 18, can be increased with this morefloats package. Otherwise, `\clear(double)page`, `h(!)`, `H` from the float package, or `\FloatBarrier` from the picins package might help.

Note: LaTeX since 2015 provides the `\extrafloats` command. Don Hosek, Quixote, 1990-07-27 (Thanks!) invented the main code for handling more floats before `\extrafloats` was available. David Carlisle pointed the maintainer to the new `\extrafloats` (Thanks!). The current maintainer is H.-Martin Münch.

Contents

1 Introduction

The default limit of unprocessed floats, 18, can be increased with this morefloats package.
"Of course one immediately begins to wonder: »Why eighteen?!« And it turns out that 18 one-line tables with 10 point Computer Modern using article.cls produces almost exactly one page worth of material."
(user https://tex.stackexchange.com/users/1495/kahen as comment to https://tex.stackexchange.com/a/35596 on 2011-11-21)
As alternatives (see also section 3 below) `\clear(double)page`, `h(!)`, `H` from the float package, or `\FloatBarrier` from the picins package might help. If the floats cannot be placed anywhere at all, extending the number of floats will just delay the arrival of the corresponding error.

2 Usage

2.1 General usage:

Load the package placing

```
\usepackage[<options>]{morefloats}
```

in the preamble of your LaTeX 2ε source file (the earlier the better).
The morefloats package takes two options: `maxfloats` and `morefloats`, where `morefloats` gives the number of additional floats and `maxfloats` gives the maximum number of floats. `maxfloats=25` therefore means, that there are 18 (default) floats and 7 additional floats. `morefloats=7` therefore has the same meaning. It is only necessary to give one of these two options. At the time being, it is not possible to reduce the number of floats (for example to save boxes). If you have code accomplishing that, please send it to the package maintainer, thanks.
Version 1.0b used a fixed value of `maxfloats=36`. Therefore for backward compatibility this value is taken as the default one.
Example:

```
\usepackage[maxfloats=25]{morefloats}
```

or

```
\usepackage[morefloats=7]{morefloats}
```

or

```
\usepackage[maxfloats=25,morefloats=7]{morefloats}
```

2.2 Situation for LaTeX before 2015:

`Float` uses `insert`, and each `insert` uses a group of `count`, `dimen`, `skip`, and `box` each. When there are not enough available, no `\newinsert` can be created. The etex package provides access at an extended range of those registers, but does not use those for `\newinsert`. Therefore the inserts must be reserved first, which forces the use of the extended register range for other new `count`, `dimen`, `skip`, and `box`: To have more floats available, use `\usepackage{etex}\reserveinserts{...}` right after `\documentclass[...]{...}`, where the argument of `\reserveinserts` should be at least the maximum number of floats. Add another 10 if the bigfoot or the manyfoot package is used, but `\reserveinserts` can be about 234 at most for older LaTeX formats.

2.3 Situation for LaTeX since 2015:

Now `\reserveinserts` can be about 2 147 483 647, but `\insert255{}` even then produces an error. The LaTeX 2015 "release provides a new command in the format `\extrafloats`"; "as it doesn't use `\newinsert` (and as the 2015 format uses extended registers by default) you can allocate a lot more floats" (both David Carlisle, 29. June 2015), e. g. `\extrafloats{1234}`.

3 Alternatives (kind of)

The very old morefloats with a fixed number of `maxfloats=36` (i. e. 18 `morefloats`) has been archived at http://mirror.ctan.org/obsolete/macros/latex/contrib/misc/morefloats.sty.

If you really want to increase the number of (possible) floats, this is the right package. On the other hand, if you ran into trouble of `Too many unprocessed floats`, but would also accept less floats, there are some other possibilities:

- The command `\clearpage` forces LaTeX to output any floating objects that occurred before this command (and go to the next page). `\cleardoublepage` does the same but ensures that the next page with output is one with odd page number.
- Using different float specifiers: `t` top, `b` bottom, `p` page of floats.
- Suggesting LaTeX to put the object where it was placed: `h` (= here) float specifier.
- Telling LaTeX to please put the object where it was placed: `h!` (= here!) float specifier.
- Forcing LaTeX to put the object where it was placed and shut up: The float package provides the "style option here, giving floating environments a [H] option which means 'PUT IT HERE' (as opposed to the standard [h] option which means 'You may put it here if you like')" (float package documentation v1.3d as of 2001/11/08). Changing e. g. `\begin{figure}[tbp]...` to `\begin{figure}[H]...` forces the figure to be placed HERE instead of floating away.
  The float package is available at https://www.ctan.org/pkg/float.
- The placeins package provides the command `\FloatBarrier`. Floats occurring before the `\FloatBarrier` are not allowed to float to a later place, and floats occurring after the `\FloatBarrier` are not allowed to float to an earlier place than the `\FloatBarrier`. (There can be more than one `\FloatBarrier` in a document.) – The same package also provides an option to automatically add `\FloatBarrier`s to section headings. It is further possible to make `\FloatBarrier`s less strict (see that package's documentation).
  The placeins package is available at https://www.ctan.org/pkg/placeins.
- Sometimes also increasing the maximum number (`\maxdeadcycles`) of calls of `\output` without a `\shipout` can help, for example `\maxdeadcycles=123\relax`.

See also the following entries in the UK List of TeX Frequently Asked Questions on the Web:

- http://www.tex.ac.uk/cgi-bin/texfaq2html?label=floats

- http://www.tex.ac.uk/cgi-bin/texfaq2html?label=tmupfl

- http://www.tex.ac.uk/cgi-bin/texfaq2html?label=figurehere

and the **excellent article on "How to influence the position of float environments like figure and table in LaTeX?" by Frank Mittelbach** at https://www.latex-project.org/publications/indexbyyear/2014/!

(You programmed or found another alternative, which is available at CTAN? OK, send an e-mail to me with the name, location at CTAN, and a short notice, and I will probably include it in the list above.)

4 Example

```
⟨*example⟩
\documentclass[british]{article}[2024/06/29]%      v1.4n
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
\usepackage[maxfloats=25]{morefloats}[2025/01/28]% v1.1a
%% \maxdeadcycles=200\relax%
%%% \maxdeadcycles is the maximum number of calls of \output
%%% without a \shipout.
\listfiles
\begin{document}

\makeatletter

\section*{Example for morefloats}
\markboth{Example for morefloats}{Example for morefloats}

This example demonstrates the use of package\newline
\textsf{morefloats}, v1.1a as of 2025/01/28 (HMM).\newline
The package takes options (here:
\verb|maxfloats=|\texttt{\morefloats@maxfloats} is used).\newline
For more details please see the documentation!\newline

To reproduce the\newline
\LaTeX{} \texttt{ Error: Too many unprocessed floats},\newline
comment out the \verb|\usepackage...| in the preamble
(line~3)\newline
(by placing a \% before it).\bigskip

There follow \morefloats@maxfloats{} floating tables.

\pagebreak

\@tempcnta=18\relax% default floats
\advance\@tempcnta by \morefloats@morefloats%
% \morefloats@morefloats is the number of additional
% floating tables to create.
\loop
  \ifnum\@tempcnta>0\relax%
  \begin{table}[t]\centering%
    \begin{tabular}{|l|}%
      \hline%
      A table, which will keep floating.\\%
      \hline
```

```
    \end{tabular}%
    \caption{A floating Table.}%
  \end{table}%
  \advance\@tempcnta by -1\relax%
\repeat

\makeatother

\end{document}
⟨/example⟩
```

5 The implementation

We start off by checking that we are loading into LaTeX 2$_\varepsilon$ and announcing the name and version of this package.

```
⟨*package⟩
\NeedsTeXFormat{LaTeX2e}[2011/06/27]
\ProvidesPackage{morefloats}[2025/01/28 v1.1a Raise limit of unprocessed floats (HMM)]

```

Options

```
\RequirePackage{kvoptions}[2011/06/30]% v3.11, newer versions exist!
\SetupKeyvalOptions{family=morefloats,prefix=morefloats@}
\DeclareStringOption{maxfloats}%  \morefloats@maxfloats
\DeclareStringOption{morefloats}% \morefloats@morefloats
\ProcessKeyvalOptions*

```

The morefloats package takes two options: `maxfloats` and `morefloats`, where `morefloats` gives the number of additional floats and `maxfloats` gives the maximum number of floats. `maxfloats=37` therefore means, that there are 18 (default) floats and another 19 additional floats. `morefloats=19` therefore has the same meaning. Version 1.0b used a fixed value of `maxfloats=36`. Therefore for backward compatibility this value will be taken as the default one.
Now we check whether `maxfloats=...` or `morefloats=...` or both were used, and if one option was not used, we supply the according value. If no option was used at all, we use the default values. Too many requested floats produce error messages by LaTeX, which might not be easily traced back to this, therefore we issue a warning. If option `maxfloats` or `morefloats` is no number, the user will received the according error message by LaTeX automatically.

```
\ifx\morefloats@maxfloats\@empty%
  \ifx\morefloats@morefloats\@empty% apply defaults:
    \gdef\morefloats@maxfloats{36}%
    \gdef\morefloats@morefloats{18}%
  \else%
    \ifnum\morefloats@morefloats>1569\relax%
      \PackageWarning{morefloats}{%
        \morefloats@morefloats\space more floats requested.\MessageBreak%
        LaTeX might run out of memory before this\MessageBreak%
        (in which case it will notify you)\MessageBreak%
       }%
    \else%
      \PackageInfo{morefloats}{%
        \morefloats@morefloats\space more floats requested.\MessageBreak%
        LaTeX might run out of memory before this\MessageBreak%
        (in which case it will notify you)\MessageBreak%
       }%
    \fi%
    \@tempcnta=\morefloats@morefloats\relax%
    \advance\@tempcnta by +18%
    \xdef\morefloats@maxfloats{\the\@tempcnta}%
  \fi%
\else%
  \ifx\morefloats@morefloats\@empty%
    \@tempcnta=\morefloats@maxfloats\relax%
    \advance\@tempcnta by -18%
    \xdef\morefloats@morefloats{\the\@tempcnta}%
    \ifnum\morefloats@morefloats<\z@\relax% i.e. \morefloats@maxfloats < 18
      \gdef\morefloats@morefloats{0}%
    \fi%
    \ifnum\morefloats@maxfloats>1587\relax%
      \PackageWarning{morefloats}{%
```

```
        \morefloats@maxfloats\space floats requested.\MessageBreak%
        LaTeX might run out of memory before this\MessageBreak%
        (in which case it will notify you)\MessageBreak%
       }%
    \fi%
  \fi%
\fi%

\@tempcnta=\morefloats@maxfloats\relax%
\xdef\morefloats@max{\the\@tempcnta}%

\ifnum\@tempcnta<18\relax%
  \PackageError{morefloats}{Option maxfloats is \the\@tempcnta<18}{%
    maxfloats must be a number equal to or larger than 18\MessageBreak%
    (or not used at all).\MessageBreak%
    Now setting maxfloats=18.\MessageBreak%
   }%
  \gdef\morefloats@max{18}%
\fi%

\@tempcnta=\morefloats@morefloats\relax%
\xdef\morefloats@more{\the\@tempcnta}%

\ifnum\@tempcnta<\z@\relax%
  \PackageError{morefloats}{Option morefloats is \the\@tempcnta<0}{%
    morefloats must be a number equal to or larger than 0\MessageBreak%
    (or not used at all).\MessageBreak%
    Now setting morefloats=0.\MessageBreak%
   }%
  \gdef\morefloats@more{0}%
\fi%

\@tempcnta=18\relax%
\advance\@tempcnta by \morefloats@more%
```

The value of `morefloats` should now be equal to the value of `morefloats@max`.

```
\advance\@tempcnta by -\morefloats@max%
```

Therefore `\@tempcnta` should now be equal to zero.

```
\xdef\morefloats@mx{\the\@tempcnta}%
\ifnum\morefloats@mx=\z@\relax%
  \@tempcnta=\morefloats@maxfloats\relax%
\else%
  \PackageError{morefloats}{%
    Clash between options maxfloats and morefloats}{%
    Option maxfloats must be empty\MessageBreak%
    or the sum of 18 and option value morefloats,\MessageBreak%
    but it is maxfloats=\morefloats@maxfloats\space and %
    morefloats=\morefloats@morefloats .\MessageBreak%
    }%
```

We choose the larger value to be used.

```
  \ifnum\@tempcnta<\z@% \morefloats@max > \morefloats@more
    \@tempcnta=\morefloats@maxfloats\relax%
  \else% \@tempcnta>0, \morefloats@max < \morefloats@more
    \@tempcnta=18\relax%
    \advance\@tempcnta by \morefloats@morefloats%
  \fi%
\fi%
\edef\morefloats@mx{\the\@tempcnta}%
```

Maybe we had to change `\morefloats@maxfloats` or `\morefloats@maxfloats`:

```
\xdef\morefloats@maxfloats{\the\@tempcnta}%
```

```
\advance\@tempcnta by -18\relax%
\xdef\morefloats@morefloats{\the\@tempcnta}%
\gdef\morefloats@test{1}%
\ifx\morefloats@morefloats\morefloats@test\relax%
  \PackageInfo{morefloats}{%
    Maximum number of possible floats asked for: \morefloats@maxfloats%
    \MessageBreak%
    (i.e. one more float)\@gobble%
   }%
\else%
  \PackageInfo{morefloats}{%
    Maximum number of possible floats asked for: \morefloats@maxfloats%
    \MessageBreak%
    (i.e. \morefloats@morefloats\space more floats).\MessageBreak%
    LaTeX might run out of memory before this\MessageBreak%
    (in which case it will notify you)%
    \@gobble%
   }%
\fi%


```

The LaTeX 2015 "release provides a new command in the format `\extrafloats` which does a similar job [as earlier versions of this package did], although as it doesn't use `\newinsert` (and as the 2015 format uses extended registers by default) you can allocate a lot more floats," e. g. `\extrafloats{1234}`. Loading the etex package and morefloats with the new format would "over-write the new allocation mechanism and end up with fewer floats available." Therefore here it is tested "for the new format and switch[ed] to the new mechanism in that case, so that existing documents work as before but using the new allocation scheme underneath." (all David Carlisle, 29. June 2015, who provided also main parts of the following code)

```
%% Test for new mechanism in LaTeX 2015:
\ifx\e@alloc\@undefined\relax%
  %% This is an old LaTeX format, \extrafloats is not available.
  \PackageWarning{morefloats}{%
    \fmtname\space <\fmtversion> %
    \ifx\patch@level\@undefined\relax%
    \else patch level \patch@level%
    \fi%
    \MessageBreak%
    found. At least\MessageBreak%
    LaTeX2e <2015/01/01> patch level 2\MessageBreak%
    is now available\MessageBreak%
    and can handle even more floats%
    \@gobble%
   }%
\else%
  %% This is new in LaTeX 2015, \extrafloats is available.
  \@ifpackageloaded{etex}%
  {%% etex package loaded:
   %% "it overwrites all the new allocation system
   %% so really \extrafloats shouldn't be expected to work"
   %% (D. Carlisle, 2015/07/16, who also provided the following
   %% \extrafloats redefinition).
   \gdef\extrafloats#1{%
     \ifnum#1>\z@\relax%
       \count@\numexpr\float@count-1\relax%
       \ch@ck0\count@\count\relax%
       \ch@ck1\count@\dimen\relax%
       \ch@ck2\count@\skip\relax%
       \ch@ck4\count@\box\relax%
```

```
      \e@alloc@chardef\float@count\count@%
      \expandafter\e@alloc@chardef\csname bx@\the\float@count\endcsname\float@count%
      \@cons\@freelist{\csname bx@\the\float@count\endcsname}%
      \expandafter%
      \extrafloats\expandafter{\numexpr#1-1\relax}%
    \fi%
  }%
 }{% etex package not loaded
  }%
 \extrafloats{\morefloats@morefloats}%
 % The part after the test is no longer needed and therefore not loaded:
 \expandafter\endinput%
\fi%
%% End of the test for LaTeX 2015 (or newer).
%% Not new format, otherwise the last \endinput would have been applied.

%% Test for e-TeX:
\RequirePackage{ifetex}[2011/12/15]% v1.2, replaced by iftex-package nowadays
\ifetex%% then we can use code similar to the one from David Carlisle,
 %%      https://tex.stackexchange.com/a/212483
 \mathchardef\float@count=32767\relax%
 \gdef\extrafloats#1{%
   \ifnum#1>\z@\relax%
     \count@\numexpr\float@count-1\relax%
     \ch@ck0\count@\count\relax%
     \ch@ck1\count@\dimen\relax%
     \ch@ck2\count@\skip\relax%
     \ch@ck4\count@\box\relax%
     \mathchardef\float@count\count@\relax%
     \expandafter\mathchardef\csname bx@\the\float@count\endcsname\float@count%
     \@cons\@freelist{\csname bx@\the\float@count\endcsname}%
     \expandafter%
     \extrafloats\expandafter{\numexpr#1-1\relax}%
   \fi}%
 \extrafloats{\morefloats@morefloats}%
 \expandafter\endinput%
\fi%
%% End of the test for e-TeX.
%% Old format and not e-TeX,
%% otherwise the last \endinput would have been applied.


```

If we ever come to this place, "everything" failed and we need to do things the old fashioned way, which severely limits the maximum number of additionally available floats.

```
\PackageWarning{morefloats}{%
 e-TeX is not available here\MessageBreak%
 but it is available in almost all\MessageBreak%
 recent TeX distributions.\MessageBreak%
 Maybe consider updating to one of those%
 \@gobble%
}%

```

Float uses insert, and each insert use a group of count, dimen, skip, and box each. When there are not enough available, no \newinsert can be created.

```
%% Code similar to the one from Heiko Oberdiek,
%% http://permalink.gmane.org/gmane.comp.tex.latex.latex3/2159
                           \@tempcnta=\the\count10 \relax \def\maxfloats@vln{count}    %
\ifnum \count11>\@tempcnta \@tempcnta=\the\count11 \relax \def\maxfloats@vln{dimen} \fi%
\ifnum \count12>\@tempcnta \@tempcnta=\the\count12 \relax \def\maxfloats@vln{skip}  \fi%
\ifnum \count14>\@tempcnta \@tempcnta=\the\count14 \relax \def\maxfloats@vln{box}   \fi%
%% end similar
\@tempcntb=234\relax%
\advance\@tempcntb by -\@tempcnta\relax%
\@tempcnta=\@tempcntb\relax%
\ifnum\morefloats@mx>\@tempcntb\relax%
  \PackageError{morefloats}{Too many floats requested}{%
    Maximum number of possible floats asked for: \morefloats@mx .\MessageBreak%
    There are only \the\@tempcnta\space \maxfloats@vln\space left,\MessageBreak%
    therefore only \the\@tempcntb\space floats will be possible.\MessageBreak%
    Load the morefloats package earlier and/or\MessageBreak%
    reduce the number of used \maxfloats@vln\space registers\MessageBreak%
    to have more floats available!\MessageBreak%
   }%
  \xdef\morefloats@mx{\the\@tempcntb}%
\fi%
```


The task at hand is to increase LaTeX's default limit of 18 unprocessed floats in memory at once to maxfloats. An examination of latex.tex reveals that this is accomplished by allocating (!) an insert register for each unprocessed float. A quick check of (the obsolete, now ltplain, update to LaTeX2e!) lplain.lis reveals that there is room, in fact, for up to 256 unprocessed floats, but TeX's main memory could be exhausted well before that happened.

LaTeX2e uses a \dimen for each \newinsert, and the number of \dimens is also restricted. Therefore only use the number of floats you need! To check the number of used registers, you could use the regstats and/or regcount packages (see subsection 6.1).

Allocating insert registers @freelist @elt newinsert

First we allocate the additional insert registers needed.

That accomplished, the next step is to define the macro `\@freelist`, which is merely a list of the box registers each preceded by `\@elt`. This approach allows processing of the list to be done far more efficiently. A similar approach is used by Mittelbach & Schöpf's `doc.sty` to keep track of control sequences, which should not be indexed.
First for the 18 default LaTeX boxes.
`\ifnum maxfloats <= 18`, LaTeX already allocated the insert registers. `\fi`

```
\global\long\def\@freelist{\@elt\bx@A\@elt\bx@B\@elt\bx@C\@elt\bx@D\@elt\bx@E\@elt\bx@F\@elt\bx@G\@elt\bx@H\@elt%
\bx@I\@elt\bx@J\@elt\bx@K\@elt\bx@L\@elt\bx@M\@elt\bx@N\@elt\bx@O\@elt\bx@P\@elt\bx@Q\@elt\bx@R}

```

Now we need to add `\@elt\bx@...` depending on the number of `morefloats` wanted:
(Karl Berry helped with two out of three `\expandafter`s, thanks!)

```
\ifnum \morefloats@mx> 18 \newinsert\bx@S  \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@S}
\ifnum \morefloats@mx> 19 \newinsert\bx@T  \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@T}
\ifnum \morefloats@mx> 20 \newinsert\bx@U  \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@U}
\ifnum \morefloats@mx> 21 \newinsert\bx@V  \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@V}
\ifnum \morefloats@mx> 22 \newinsert\bx@W  \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@W}
\ifnum \morefloats@mx> 23 \newinsert\bx@X  \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@X}
\ifnum \morefloats@mx> 24 \newinsert\bx@Y  \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@Y}
\ifnum \morefloats@mx> 25 \newinsert\bx@Z  \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@Z}
\ifnum \morefloats@mx> 26 \newinsert\bx@AA \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@AA}
\ifnum \morefloats@mx> 27 \newinsert\bx@AB \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@AB}
\ifnum \morefloats@mx> 28 \newinsert\bx@AC \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@AC}
\ifnum \morefloats@mx> 29 \newinsert\bx@AD \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@AD}
\ifnum \morefloats@mx> 30 \newinsert\bx@AE \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@AE}
\ifnum \morefloats@mx> 31 \newinsert\bx@AF \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@AF}
\ifnum \morefloats@mx> 32 \newinsert\bx@AG \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@AG}
\ifnum \morefloats@mx> 33 \newinsert\bx@AH \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@AH}
\ifnum \morefloats@mx> 34 \newinsert\bx@AI \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@AI}
\ifnum \morefloats@mx> 35 \newinsert\bx@AJ \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@AJ}
```

```
\ifnum \morefloats@mx> 36 \newinsert\bx@AK \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@AK}
\ifnum \morefloats@mx> 37 \newinsert\bx@AL \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@AL}
\ifnum \morefloats@mx> 38 \newinsert\bx@AM \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@AM}
\ifnum \morefloats@mx> 39 \newinsert\bx@AN \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@AN}
\ifnum \morefloats@mx> 40 \newinsert\bx@AO \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@AO}
\ifnum \morefloats@mx> 41 \newinsert\bx@AP \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@AP}
\ifnum \morefloats@mx> 42 \newinsert\bx@AQ \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@AQ}
\ifnum \morefloats@mx> 43 \newinsert\bx@AR \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@AR}
\ifnum \morefloats@mx> 44 \newinsert\bx@AS \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@AS}
\ifnum \morefloats@mx> 45 \newinsert\bx@AT \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@AT}
\ifnum \morefloats@mx> 46 \newinsert\bx@AU \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@AU}
\ifnum \morefloats@mx> 47 \newinsert\bx@AV \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@AV}
\ifnum \morefloats@mx> 48 \newinsert\bx@AW \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@AW}
\ifnum \morefloats@mx> 49 \newinsert\bx@AX \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@AX}
\ifnum \morefloats@mx> 50 \newinsert\bx@AY \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@AY}
\ifnum \morefloats@mx> 51 \newinsert\bx@AZ \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@AZ}
\ifnum \morefloats@mx> 52 \newinsert\bx@BA \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@BA}
\ifnum \morefloats@mx> 53 \newinsert\bx@BB \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@BB}
\ifnum \morefloats@mx> 54 \newinsert\bx@BC \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@BC}
\ifnum \morefloats@mx> 55 \newinsert\bx@BD \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@BD}
\ifnum \morefloats@mx> 56 \newinsert\bx@BE \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@BE}
\ifnum \morefloats@mx> 57 \newinsert\bx@BF \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@BF}
\ifnum \morefloats@mx> 58 \newinsert\bx@BG \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@BG}
\ifnum \morefloats@mx> 59 \newinsert\bx@BH \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@BH}
\ifnum \morefloats@mx> 60 \newinsert\bx@BI \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@BI}
\ifnum \morefloats@mx> 61 \newinsert\bx@BJ \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@BJ}
\ifnum \morefloats@mx> 62 \newinsert\bx@BK \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@BK}
\ifnum \morefloats@mx> 63 \newinsert\bx@BL \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@BL}
\ifnum \morefloats@mx> 64 \newinsert\bx@BM \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@BM}
\ifnum \morefloats@mx> 65 \newinsert\bx@BN \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@BN}
\ifnum \morefloats@mx> 66 \newinsert\bx@BO \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@BO}
\ifnum \morefloats@mx> 67 \newinsert\bx@BP \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@BP}
```

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\ifnum \morefloats@mx> 68 \newinsert\bx@BQ \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@BQ}
\ifnum \morefloats@mx> 69 \newinsert\bx@BR \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@BR}
\ifnum \morefloats@mx> 70 \newinsert\bx@BS \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@BS}
\ifnum \morefloats@mx> 71 \newinsert\bx@BT \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@BT}
\ifnum \morefloats@mx> 72 \newinsert\bx@BU \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@BU}
\ifnum \morefloats@mx> 73 \newinsert\bx@BV \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@BV}
\ifnum \morefloats@mx> 74 \newinsert\bx@BW \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@BW}
\ifnum \morefloats@mx> 75 \newinsert\bx@BX \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@BX}
\ifnum \morefloats@mx> 76 \newinsert\bx@BY \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@BY}
\ifnum \morefloats@mx> 77 \newinsert\bx@BZ \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@BZ}
\ifnum \morefloats@mx> 78 \newinsert\bx@CA \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@CA}
\ifnum \morefloats@mx> 79 \newinsert\bx@CB \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@CB}
\ifnum \morefloats@mx> 80 \newinsert\bx@CC \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@CC}
\ifnum \morefloats@mx> 81 \newinsert\bx@CD \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@CD}
\ifnum \morefloats@mx> 82 \newinsert\bx@CE \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@CE}
\ifnum \morefloats@mx> 83 \newinsert\bx@CF \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@CF}
\ifnum \morefloats@mx> 84 \newinsert\bx@CG \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@CG}
\ifnum \morefloats@mx> 85 \newinsert\bx@CH \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@CH}
\ifnum \morefloats@mx> 86 \newinsert\bx@CI \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@CI}
\ifnum \morefloats@mx> 87 \newinsert\bx@CJ \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@CJ}
\ifnum \morefloats@mx> 88 \newinsert\bx@CK \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@CK}
\ifnum \morefloats@mx> 89 \newinsert\bx@CL \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@CL}
\ifnum \morefloats@mx> 90 \newinsert\bx@CM \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@CM}
\ifnum \morefloats@mx> 91 \newinsert\bx@CN \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@CN}
\ifnum \morefloats@mx> 92 \newinsert\bx@CO \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@CO}
\ifnum \morefloats@mx> 93 \newinsert\bx@CP \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@CP}
\ifnum \morefloats@mx> 94 \newinsert\bx@CQ \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@CQ}
\ifnum \morefloats@mx> 95 \newinsert\bx@CR \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@CR}
\ifnum \morefloats@mx> 96 \newinsert\bx@CS \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@CS}
\ifnum \morefloats@mx> 97 \newinsert\bx@CT \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@CT}
\ifnum \morefloats@mx> 98 \newinsert\bx@CU \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@CU}
\ifnum \morefloats@mx> 99 \newinsert\bx@CV \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@CV}
```

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\ifnum \morefloats@mx>100 \newinsert\bx@CW \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@CW}
\ifnum \morefloats@mx>101 \newinsert\bx@CX \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@CX}
\ifnum \morefloats@mx>102 \newinsert\bx@CY \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@CY}
\ifnum \morefloats@mx>103 \newinsert\bx@CZ \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@CZ}
\ifnum \morefloats@mx>104 \newinsert\bx@DA \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@DA}
\ifnum \morefloats@mx>105 \newinsert\bx@DB \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@DB}
\ifnum \morefloats@mx>106 \newinsert\bx@DC \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@DC}
\ifnum \morefloats@mx>107 \newinsert\bx@DD \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@DD}
\ifnum \morefloats@mx>108 \newinsert\bx@DE \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@DE}
\ifnum \morefloats@mx>109 \newinsert\bx@DF \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@DF}
\ifnum \morefloats@mx>110 \newinsert\bx@DG \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@DG}
\ifnum \morefloats@mx>111 \newinsert\bx@DH \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@DH}
\ifnum \morefloats@mx>112 \newinsert\bx@DI \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@DI}
\ifnum \morefloats@mx>113 \newinsert\bx@DJ \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@DJ}
\ifnum \morefloats@mx>114 \newinsert\bx@DK \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@DK}
\ifnum \morefloats@mx>115 \newinsert\bx@DL \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@DL}
\ifnum \morefloats@mx>116 \newinsert\bx@DM \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@DM}
\ifnum \morefloats@mx>117 \newinsert\bx@DN \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@DN}
\ifnum \morefloats@mx>118 \newinsert\bx@DO \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@DO}
\ifnum \morefloats@mx>119 \newinsert\bx@DP \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@DP}
\ifnum \morefloats@mx>120 \newinsert\bx@DQ \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@DQ}
\ifnum \morefloats@mx>121 \newinsert\bx@DR \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@DR}
\ifnum \morefloats@mx>122 \newinsert\bx@DS \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@DS}
\ifnum \morefloats@mx>123 \newinsert\bx@DT \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@DT}
\ifnum \morefloats@mx>124 \newinsert\bx@DU \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@DU}
\ifnum \morefloats@mx>125 \newinsert\bx@DV \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@DV}
\ifnum \morefloats@mx>126 \newinsert\bx@DW \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@DW}
\ifnum \morefloats@mx>127 \newinsert\bx@DX \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@DX}
\ifnum \morefloats@mx>128 \newinsert\bx@DY \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@DY}
\ifnum \morefloats@mx>129 \newinsert\bx@DZ \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@DZ}
\ifnum \morefloats@mx>130 \newinsert\bx@EA \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@EA}
\ifnum \morefloats@mx>131 \newinsert\bx@EB \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@EB}
```

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\ifnum \morefloats@mx>132 \newinsert\bx@EC \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@EC}
\ifnum \morefloats@mx>133 \newinsert\bx@ED \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@ED}
\ifnum \morefloats@mx>134 \newinsert\bx@EE \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@EE}
\ifnum \morefloats@mx>135 \newinsert\bx@EF \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@EF}
\ifnum \morefloats@mx>136 \newinsert\bx@EG \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@EG}
\ifnum \morefloats@mx>137 \newinsert\bx@EH \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@EH}
\ifnum \morefloats@mx>138 \newinsert\bx@EI \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@EI}
\ifnum \morefloats@mx>139 \newinsert\bx@EJ \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@EJ}
\ifnum \morefloats@mx>140 \newinsert\bx@EK \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@EK}
\ifnum \morefloats@mx>141 \newinsert\bx@EL \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@EL}
\ifnum \morefloats@mx>142 \newinsert\bx@EM \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@EM}
\ifnum \morefloats@mx>143 \newinsert\bx@EN \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@EN}
\ifnum \morefloats@mx>144 \newinsert\bx@EO \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@EO}
\ifnum \morefloats@mx>145 \newinsert\bx@EP \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@EP}
\ifnum \morefloats@mx>146 \newinsert\bx@EQ \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@EQ}
\ifnum \morefloats@mx>147 \newinsert\bx@ER \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@ER}
\ifnum \morefloats@mx>148 \newinsert\bx@ES \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@ES}
\ifnum \morefloats@mx>149 \newinsert\bx@ET \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@ET}
\ifnum \morefloats@mx>150 \newinsert\bx@EU \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@EU}
\ifnum \morefloats@mx>151 \newinsert\bx@EV \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@EV}
\ifnum \morefloats@mx>152 \newinsert\bx@EW \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@EW}
\ifnum \morefloats@mx>153 \newinsert\bx@EX \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@EX}
\ifnum \morefloats@mx>154 \newinsert\bx@EY \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@EY}
\ifnum \morefloats@mx>155 \newinsert\bx@EZ \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@EZ}
\ifnum \morefloats@mx>156 \newinsert\bx@FA \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@FA}
\ifnum \morefloats@mx>157 \newinsert\bx@FB \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@FB}
\ifnum \morefloats@mx>158 \newinsert\bx@FC \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@FC}
\ifnum \morefloats@mx>159 \newinsert\bx@FD \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@FD}
\ifnum \morefloats@mx>160 \newinsert\bx@FE \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@FE}
\ifnum \morefloats@mx>161 \newinsert\bx@FF \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@FF}
\ifnum \morefloats@mx>162 \newinsert\bx@FG \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@FG}
\ifnum \morefloats@mx>163 \newinsert\bx@FH \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@FH}
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\ifnum \morefloats@mx>164 \newinsert\bx@FI \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@FI}
\ifnum \morefloats@mx>165 \newinsert\bx@FJ \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@FJ}
\ifnum \morefloats@mx>166 \newinsert\bx@FK \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@FK}
\ifnum \morefloats@mx>167 \newinsert\bx@FL \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@FL}
\ifnum \morefloats@mx>168 \newinsert\bx@FM \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@FM}
\ifnum \morefloats@mx>169 \newinsert\bx@FN \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@FN}
\ifnum \morefloats@mx>170 \newinsert\bx@FO \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@FO}
\ifnum \morefloats@mx>171 \newinsert\bx@FP \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@FP}
\ifnum \morefloats@mx>172 \newinsert\bx@FQ \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@FQ}
\ifnum \morefloats@mx>173 \newinsert\bx@FR \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@FR}
\ifnum \morefloats@mx>174 \newinsert\bx@FS \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@FS}
\ifnum \morefloats@mx>175 \newinsert\bx@FT \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@FT}
\ifnum \morefloats@mx>176 \newinsert\bx@FU \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@FU}
\ifnum \morefloats@mx>177 \newinsert\bx@FV \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@FV}
\ifnum \morefloats@mx>178 \newinsert\bx@FW \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@FW}
\ifnum \morefloats@mx>179 \newinsert\bx@FX \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@FX}
\ifnum \morefloats@mx>180 \newinsert\bx@FY \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@FY}
\ifnum \morefloats@mx>181 \newinsert\bx@FZ \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@FZ}
\ifnum \morefloats@mx>182 \newinsert\bx@GA \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@GA}
\ifnum \morefloats@mx>183 \newinsert\bx@GB \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@GB}
\ifnum \morefloats@mx>184 \newinsert\bx@GC \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@GC}
\ifnum \morefloats@mx>185 \newinsert\bx@GD \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@GD}
\ifnum \morefloats@mx>186 \newinsert\bx@GE \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@GE}
\ifnum \morefloats@mx>187 \newinsert\bx@GF \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@GF}
\ifnum \morefloats@mx>188 \newinsert\bx@GG \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@GG}
\ifnum \morefloats@mx>189 \newinsert\bx@GH \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@GH}
\ifnum \morefloats@mx>190 \newinsert\bx@GI \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@GI}
\ifnum \morefloats@mx>191 \newinsert\bx@GJ \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@GJ}
\ifnum \morefloats@mx>192 \newinsert\bx@GK \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@GK}
\ifnum \morefloats@mx>193 \newinsert\bx@GL \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@GL}
\ifnum \morefloats@mx>194 \newinsert\bx@GM \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@GM}
\ifnum \morefloats@mx>195 \newinsert\bx@GN \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@GN}
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\ifnum \morefloats@mx>196 \newinsert\bx@GO \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@GO}
\ifnum \morefloats@mx>197 \newinsert\bx@GP \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@GP}
\ifnum \morefloats@mx>198 \newinsert\bx@GQ \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@GQ}
\ifnum \morefloats@mx>199 \newinsert\bx@GR \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@GR}
\ifnum \morefloats@mx>200 \newinsert\bx@GS \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@GS}
\ifnum \morefloats@mx>201 \newinsert\bx@GT \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@GT}
\ifnum \morefloats@mx>202 \newinsert\bx@GU \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@GU}
\ifnum \morefloats@mx>203 \newinsert\bx@GV \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@GV}
\ifnum \morefloats@mx>204 \newinsert\bx@GW \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@GW}
\ifnum \morefloats@mx>205 \newinsert\bx@GX \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@GX}
\ifnum \morefloats@mx>206 \newinsert\bx@GY \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@GY}
\ifnum \morefloats@mx>207 \newinsert\bx@GZ \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@GZ}
\ifnum \morefloats@mx>208 \newinsert\bx@HA \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@HA}
\ifnum \morefloats@mx>209 \newinsert\bx@HB \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@HB}
\ifnum \morefloats@mx>210 \newinsert\bx@HC \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@HC}
\ifnum \morefloats@mx>211 \newinsert\bx@HD \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@HD}
\ifnum \morefloats@mx>212 \newinsert\bx@HE \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@HE}
\ifnum \morefloats@mx>213 \newinsert\bx@HF \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@HF}
\ifnum \morefloats@mx>214 \newinsert\bx@HG \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@HG}
\ifnum \morefloats@mx>215 \newinsert\bx@HH \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@HH}
\ifnum \morefloats@mx>216 \newinsert\bx@HI \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@HI}
\ifnum \morefloats@mx>217 \newinsert\bx@HJ \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@HJ}
\ifnum \morefloats@mx>218 \newinsert\bx@HK \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@HK}
\ifnum \morefloats@mx>219 \newinsert\bx@HL \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@HL}
\ifnum \morefloats@mx>220 \newinsert\bx@HM \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@HM}
\ifnum \morefloats@mx>221 \newinsert\bx@HN \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@HN}
\ifnum \morefloats@mx>222 \newinsert\bx@HO \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@HO}
\ifnum \morefloats@mx>223 \newinsert\bx@HP \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@HP}
\ifnum \morefloats@mx>224 \newinsert\bx@HQ \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@HQ}
\ifnum \morefloats@mx>225 \newinsert\bx@HR \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@HR}
\ifnum \morefloats@mx>226 \newinsert\bx@HS \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@HS}
\ifnum \morefloats@mx>227 \newinsert\bx@HT \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@HT}
```

```
\ifnum \morefloats@mx>228 \newinsert\bx@HU \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@HU}
\ifnum \morefloats@mx>229 \newinsert\bx@HV \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@HV}
\ifnum \morefloats@mx>230 \newinsert\bx@HW \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@HW}
\ifnum \morefloats@mx>231 \newinsert\bx@HX \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@HX}
\ifnum \morefloats@mx>232 \newinsert\bx@HY \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@HY}
\ifnum \morefloats@mx>233 \newinsert\bx@HZ \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@HZ}
\ifnum \morefloats@mx>234 \newinsert\bx@IA \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@IA}
\ifnum \morefloats@mx>235 \newinsert\bx@IB \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@IB}
\ifnum \morefloats@mx>236 \newinsert\bx@IC \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@IC}
\ifnum \morefloats@mx>237 \newinsert\bx@ID \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@ID}
\ifnum \morefloats@mx>238 \newinsert\bx@IE \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@IE}
\ifnum \morefloats@mx>239 \newinsert\bx@IF \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@IF}
\ifnum \morefloats@mx>240 \newinsert\bx@IG \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@IG}
\ifnum \morefloats@mx>241 \newinsert\bx@IH \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@IH}
\ifnum \morefloats@mx>242 \newinsert\bx@II \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@II}
\ifnum \morefloats@mx>243 \newinsert\bx@IJ \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@IJ}
\ifnum \morefloats@mx>244 \newinsert\bx@IK \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@IK}
\ifnum \morefloats@mx>245 \newinsert\bx@IL \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@IL}
\ifnum \morefloats@mx>246 \newinsert\bx@IM \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@IM}
\ifnum \morefloats@mx>247 \newinsert\bx@IN \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@IN}
\ifnum \morefloats@mx>248 \newinsert\bx@IO \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@IO}
\ifnum \morefloats@mx>249 \newinsert\bx@IP \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@IP}
\ifnum \morefloats@mx>250 \newinsert\bx@IQ \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@IQ}
\ifnum \morefloats@mx>251 \newinsert\bx@IR \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@IR}
\ifnum \morefloats@mx>252 \newinsert\bx@IS \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@IS}
\ifnum \morefloats@mx>253 \newinsert\bx@IT \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@IT}
\ifnum \morefloats@mx>254 \newinsert\bx@IU \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@IU}
\ifnum \morefloats@mx>255 \newinsert\bx@IV \expandafter\gdef\expandafter\@freelist\expandafter{\@freelist \@elt\bx@IV}
```

```
\ifnum \morefloats@mx>256\relax%
 \PackageError{morefloats}{Too many floats called for}{%
  You requested more than 256 floats.\MessageBreak%
  (\morefloats@mx\space to be precise.)\MessageBreak%
  LaTeX before 2015 could not process\MessageBreak%
  more than 256 floats, therefore the morefloats\MessageBreak%
  package only provides 256 floats.\MessageBreak%
  If you need more floats,\MessageBreak%
  update to a current (>=2015) LaTeX distribution.\MessageBreak%
  I expected LaTeX (prior 2015) to run out of dimensions\MessageBreak%
  or memory long before reaching 256 floats anyway.\MessageBreak%
 }%
\fi \fi \fi \fi \fi \fi \fi \fi \fi \fi \fi \fi \fi \fi \fi \fi \fi \fi
\fi \fi \fi \fi \fi \fi \fi \fi \fi \fi \fi \fi \fi \fi \fi \fi \fi \fi
\fi \fi \fi \fi \fi \fi \fi \fi \fi \fi \fi \fi \fi \fi \fi \fi \fi \fi
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\fi \fi \fi \fi \fi

```

⟨/package⟩

6 Installation

6.1 Downloads

Everything is available at https://www.ctan.org, but may need additional packages themselves.

morefloats.dtx

For unpacking the `morefloats.dtx` file and constructing the documentation it is required:

- TEXFormat LATEX 2ε: https://www.CTAN.org
- document class ltxdoc, 2015/03/26, v2.0w, https://www.ctan.org/pkg/ltxdoc
- package fontenc, 2005/09/27, v1.99g, https://ctan.org/pkg/fontenc
- package pdflscape, 2008/08/11, v0.10, https://ctan.org/pkg/pdflscape
- package holtxdoc, 2012/03/21, v0.24, https://ctan.org/pkg/holtxdoc
- package hypdoc, 2011/08/19, v1.11, https://ctan.org/pkg/hypdoc

morefloats.sty

The `morefloats.sty` for LATEX 2ε (i. e. each document using the morefloats package) requires:

- TEXFormat LATEX 2ε, https://www.CTAN.org/
- package kvoptions, 2011/06/30, v3.11, https://ctan.org/pkg/kvoptions
- package ifetex, 2011/12/15, v1.2, https://ctan.org/pkg/ifetex, is used in some cases, nowadays replaced by the https://ctan.org/pkg/iftex package

regstats
regcount

To check the number of used registers it was mentioned:

- package regstats, https://ctan.org/pkg/regstats
- package regcount, https://ctan.org/pkg/regcount

Oberdiek
holtxdoc
hypdoc

All packages of Heiko Oberdiek's bundle 'oberdiek' (especially holtxdoc, hypdoc, and kvoptions) are also available in a TDS compliant ZIP archive: http://mirror.ctan.org/install/macros/latex/contrib/oberdiek.tds.zip. It is probably best to download and use this, because the packages in there are quite probably both recent and compatible among themselves.

hyperref

hyperref is not included in that bundle and needs to be downloaded separately, http://mirror.ctan.org/install/macros/latex/contrib/hyperref.tds.zip.

Münch

A hyperlinked list of my (other) packages can be found at https://www.ctan.org/author/muench-hm.

6.2 Package, unpacking TDS

Package. This package is available on https://www.CTAN.org.

http://mirror.ctan.org/macros/latex/contrib/morefloats/morefloats.dtx
The source file.

http://mirror.ctan.org/macros/latex/contrib/morefloats/morefloats.pdf
The documentation.

http://mirror.ctan.org/macros/latex/contrib/morefloats/README
The README file.

There is also a `morefloats.tds.zip` available:

http://mirror.ctan.org/install/macros/latex/contrib/morefloats.tds.zip
Everything in TDS compliant, compiled format.

which additionally contains

morefloats.ins	The installation file.
morefloats.drv	The driver to generate the documentation.
morefloats.sty	The `.style` file.
morefloats-example.tex	The example file.
morefloats-example.pdf	The compiled example file.

For required other packages, please see the preceding subsection.

Unpacking. The `.dtx` file is a self-extracting docstrip archive. The files are extracted by running the `.dtx` through plain TEX:

```
tex morefloats.dtx
```

About generating the documentation see paragraph 6.4 below.

TDS. Now the different files must be moved into the different directories in your installation TDS tree (also known as `texmf` tree):

```
morefloats.sty          → tex/latex/morefloats/morefloats.sty
morefloats.pdf          → doc/latex/morefloats/morefloats.pdf
morefloats-example.tex  → doc/latex/morefloats/morefloats-example.tex
morefloats-example.pdf  → doc/latex/morefloats/morefloats-example.pdf
morefloats.dtx          → source/latex/morefloats/morefloats.dtx
```

If you have a `docstrip.cfg` that configures and enables docstrip's TDS installing feature, then some files can already be in the right place, see the documentation of docstrip.

6.3 Refresh file name databases

If your TEX distribution (TEX Live, MiKTEX, teTEX, ...) relies on file name databases, you must refresh these. For example, teTEX users run `texhash` or `mktexlsr`.

6.4 Some details for the interested

Unpacking with LATEX. The `.dtx` chooses its action depending on the format:

plain TEX: Run docstrip and extract the files.

LATEX: Generate the documentation.

If you insist on using LATEX for docstrip (really, docstrip does not need LATEX), then inform the autodetect routine about your intention:

```
latex \let\install=y\input{morefloats.dtx}
```

Do not forget to quote the argument according to the demands of your shell.

Generating the documentation. You can use both the `.dtx` or the `.drv` to generate the documentation. The process can be configured by a configuration file `ltxdoc.cfg`. For instance, put the following line into this file, if you want to have A4 as paper format:

```
\PassOptionsToClass{a4paper}{article}
```

An example follows how to generate the documentation with pdfLATEX:

```
pdflatex morefloats.dtx
makeindex -s gind.ist morefloats.idx
pdflatex morefloats.dtx
makeindex -s gind.ist morefloats.idx
pdflatex morefloats.dtx
```

6.5 Compiling the example

The example file, morefloats-example.tex, can be compiled via `(pdf)latex morefloats-example.tex`.

7 Acknowledgements

LaTeX 2015 provides the `\extrafloats` command. Don Hosek, Quixote, 1990-07-27 (Thanks!) invented the main code for handling more floats before `\extrafloats` was available. David Carlisle pointed the maintainer to the new `\extrafloats` and provided the code for `\extrafloats` in case `\extrafloats` is not yet available at the used system (Thanks!). The current maintainer is H.-Martin Münch.
I would like to thank additionally Karl Berry for helping with taking over the maintainership of this package and two missing `\expandafter`s and Heiko Oberdiek for providing a lot (!) of useful packages (from which I also got everything I know about creating a file in `dtx` format, ok, say it: copying).

8 History

[1990/07/27 v1.0a]

- Created by Don Hosek.

[2008/11/14 v1.0b]

- Clea F. Rees added a license line.

[2010/09/20 v1.0c]

- `.dtx` created by H.-Martin Münch.
- Included more documentation and alternatives.
- Included options to allow the user to flexible choose the number of floats from 18 up to 256 instead of fixed 36.
- Included an example file.
- Created a `README` file.

[2011/02/01 v1.0d]

- References to http://www.tex.ac.uk/cgi-bin/texfaq2html?label=figurehere and http://mirror.ctan.org/obsolete/macros/latex/contrib/misc/morefloats.sty added.
- Now using the lscape package from the graphics bundle to print some pages of the documentation in landscape instead of portrait mode, because they were way too wide. (*Since v1.0e replaced by pdflscape package.*)
- Updated the version of the hyperref package. (*Since version 1.0e the morefloats package uses a fixed version of the holtxdoc package, which calls for the right version of the hyperref package, therefore it is no longer necessary to give the recent version of the hyperref package here.*)

[2011/07/10 v1.0e]

- There is a new version of the used kvoptions package.
- Now using the pdflscape package instead of the lscape package in the documentation.
- The holtxdoc package was fixed, therefore the warning in `drv` could be removed. – Adapted the style of this documentation to new Oberdiek `dtx` style.

[2012/01/28 v1.0f]

- Bug fix: wrong path given in the documentation, fixed.
- Replaced `\global\edef` by `\xdef`.
- No longer uses a counter for itself but temporary ones. (For the floats of course inserts and therefore counts are still used.)
- The number of available inserts is checked before the allocation.
- Maximum number of floats/inserts is 256, not 266; corrected.
- Quite some additional changes in the `dtx` and README files.

[2015/07/16 v1.0g]

- Implemented the new `\extrafloats` from LaTeX 2015 allowing several hundreds of additional floats.
- Update of documentation, README, and `dtx` internals.

[2015/07/22 v1.0h]

- Handling of more floats depending on new/old LaTeX format, availability of ε-TeX in the used distribution, and loading of the etex package (before morefloats/after morefloats/not at all) should now ensure that the maximum number for available floats can be allocated.
- The example file now uses a flexible number of floats.

[2025/01/28 v1.1a]

- Converted to UTF-8 and new format.

When you find a mistake or have a suggestion for an improvement of this package, please send an e-mail to the maintainer, thanks! (Please see BUG REPORTS in the README.)

9 Index

Numbers written in italic refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; plain numbers refer to the code lines where the entry is used.