CONTEXT

basicexam

Memoir Ever

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Memoir Ever

```
1  \startmodule[basicexam]
2  \unprotect
3  \setupmodule[mode=student]
4  \def\errorparameter#1{\begingroup
5    \startalignment[center]
6    \framed[align={center,lohi},width=max]{
7    \switchtocolor[blue]\tta
8    There is something Wrong happened at \color[red]{\underbar{parameter:#1}}.\\
9    Please check your code.\\
10   }\stopalignment
11   \endgroup}
```

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第1部分   尚未處理的組合

設置頁面 2UP Printing

```
\setuppapersize[user pagesize][real pagesize,real orientation]
\setuparranging[page arrange method]
more info : https://wiki.contextgarden.net/Command/setuparranging
        https://wiki.contextgarden.net/Imposition
```

例如:

```
\setuppapersize[A4][A3,landscape]
\setuparranging[2SIDE]%[2UP]
\setuppagenumbering[alternative=singlesided]%{doublesided}]
```

```
12  \defineconversion [hiragana]    [あ,い,う,え,お,か,き,く,け,こ,さ,し,す,せ,そ,
13                    た,ち,つ,て,と,な,に,ぬ,ね,の,は,ひ,ふ,へ,ほ,
14                    ま,み,む,め,も,や,ゆ,よ,ら,り,る,れ,ろ,わ,ん]
15  \defineconversion [katakana]    [ア,イ,ウ,エ,オ,カ,キ,ク,ケ,コ,サ,シ,ス,セ,ソ,
16                    タ,チ,ツ,テ,ト,ナ,ニ,ヌ,ネ,ノ,ハ,ヒ,フ,ヘ,ホ,
17                    マ,ミ,ム,メ,モ,ヤ,ユ,ヨ,ラ,リ,ル,レ,ロ,ワ,ン]
18  \defineconversion [hiragana-iroha][い,ろ,は,に,ほ,へ,と,ち,り,ぬ,る,を,わ,か,よ,
19                    た,れ,そ,つ,ね,な,ら,む,う,ゐ,の,お,く,や,ま,
20                    け,ふ,こ,え,て,あ,さ,き,ゆ,め,み,し,ゑ,ひ,も,
21                    せ,す,ん]
22  \defineconversion [katakana-iroha][イ,ロ,ハ,ニ,ホ,ヘ,ト,チ,リ,ヌ,ル,ヲ,ワ,カ,ヨ,
23                    タ,レ,ソ,ツ,ネ,ナ,ラ,ム,ウ,ヰ,ノ,オ,ク,ヤ,マ,
24                    ケ,フ,コ,エ,テ,ア,サ,キ,ユ,メ,ミ,シ,ヱ,ヒ,モ,
25                    セ,ス,ン]
```

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第2部分　繪製卷頭

下面的命令簡單地展示了如何定義、設定並繪製一個新卷頭。

- ·　通過 \definepapertitle[PaperTitleName] 命令可以新建卷頭信息,
- ·　通過 \setuppapertitle[PaperTitleName] 命令可以設定卷頭信息,
- ·　通過 \makepapertitle[PaperTitleName] 命令可以繪製卷頭結果。

```
\definepapertitle[papertitles]
\setuppapertitle [papertitles][
  n=5,
  typi=secret,
  typii=title,
  typiii=subject,
  typiv=information,
  typv=notice,
  secretstyle=\ss,
  titlestyle=\ssa,
  subjectstyle=\ssb,
  informationstyle=\ttx,
  noticestyle=\rm\it,
  secretalign=flushleft,
  titlealign=center,
  subjectalign=center,
  informationalign=center,
  noticealign=flushleft,
  secret={绝密 ★ 启用前},
  title={2021 年普通高等学校招生全国统一考试},
  subject={日语},
  information={总分:150 分, 考试时间:120 分钟},
  notice={注意事项:
   \startitemize[n,packed,joinedup]
     \item 答题前, 务必将自己的姓名、准考证号填写在%
         答题卡规定的位置上。%
     \item 答选择题时, 必须使用 2B 铅笔将答题卡上对%
         应题目的答案标号涂黑。如需改动, 用橡皮擦%
         擦干净后, 再选涂其它答案标号。答非选择题%
         时, 必须使用 0.5 毫米黑色签字笔, 将答案%
         书写在答题卡规定的位置上。所有题目必须在答%
         题卡上作答, 在试题卷上答题无效。 %
     \item 考试结束后, 将试题卷和答题卡一并交回。
     \stopitemize},
  ]
\makepapertitle [papertitles]
```

绝密 ★ 启用前

2021 年普通高等学校招生全国统一考试
日语

总分:150 分, 考试时间:120 分钟

注意事项:

1. 答题前，务必将自己的姓名 准考证号填写在答题卡规定的位置上。

2. 答选择题时 ，必须使用 *2B* 铅笔将答题卡上对应题目的答案标号涂黑 如需改动 ，用橡皮擦擦干净后 ，再选涂其它答案标号 答非选择题时 ，必须使用 *0.5* 毫米黑色签字笔 ，将答案书写在答题卡规定的位置上 所有题目必须在答题卡上作答 ，在试题卷上答题无效。

3. 考试结束后 ，将试题卷和答题卡一并交回。

```
26  \setuplabeltext [cn] [section={第,部分},subsection={第,节},]

27  \definehead [ego] [section]      % me latin
28  \definehead [isea] [subsection]  % he or she latin
29  \definehead [heu] [subsubsection] % och
30  \setuphead [ego] [sectionsegments=section,numbercommand=]
31  \setupheads [isea] [numbercommand=]
32  \setupheads [ego,isea]
33          [indentnext=yes,align=flushleft,
34          before={\blank[quarterline]},
35          after={\blank[quarterline]},
36          sectionconversionset=examnum]
37  \setuphead [ego]  [style=\ssa]
38  \setuphead [isea] [style=\hwa]
39  \definestructureconversionset[examnum][chinesenumerals][chinesenumerals]
40  \let\setuppapertitle\setgvariables
41  \def\definepapertitle[#1]{%
42   \gdef\currentpapertitle{#1}%
43   \setuppapertitle[\currentpapertitle][
44           n=5,          % 定义需要在试卷标题处需要显示多少元素,
45           typi=secret,     % 同时, 自动定义相应数量的元素命令
46          typii=title,     % 使用typi typii typiii typiv ...
47         typiii=subject,    % 定义每个元素的名称, 同时自动生成相关样式化命令
48          typiv=information,  % X Xstyle Xalign beforeX afterX vspacetypi
49          typv=notice,
50        secretstyle=\ss,
51        titlestyle=\ssa,
52       subjectstyle=\ssb,
53     informationstyle=\ttx,
54       noticestyle=\rm\it,
55       secretalign=flushleft,
56        titlealign=center,
57       subjectalign=center,
58     informationalign=center,
59       noticealign=flushleft,
60         secret={绝密 ★ 启用前},
61          title={\currentdate[year] 年普通高等学校招生全国统一考试},
62        subject={SubJect},
63      information={总分:150 分, 考试时间:120 分钟},
```

```
64              notice={注意事项：
65                  \startitemize[n,packed,joinedup]
66                      \item 答题前，务必将自己的姓名、准考证号填写在%
67                          答题卡规定的位置上。%
68                      \item 答选择题时，必须使用 2B 铅笔将答题卡上对%
69                          应题目的答案标号涂黑。如需改动，用橡皮擦%
70                          擦干净后，再选涂其它答案标号。答非选择题%
71                          时，必须使用 0.5 毫米黑色签字笔，将答案%
72                          书写在答题卡规定的位置上。所有题目必须在答%
73                          题卡上作答，在试题卷上答题无效。 %
74                      \item 考试结束后，将试题卷和答题卡一并交回。
75                  \stopitemize},
76      ]}

77  \def\doifemptyelsex#1#2{\doifelse{#1}{}{#2}{#1}}
78  \def\definevariable[#1][#2]{% #1=namespace #2=element name
79    \doifelse{\getvariable{#1}{#2align}}{}
80          {\setupalign[center]}
81          {\setupalign[\getvariable{#1}{#2align}]}
82      \vskip .1\baselineskip\relax
83      \doifemptyelsex{\getvariable{#1}{before#2}}{}
84      \doifemptyelsex{\getvariable{#1}{#2style}}{}
85      \doifemptyelsex{\getvariable{#1}{#2}}
86              {\framed[color=red]
87              {\ss warning: #2 is empty ! please input #2.
88                 or maybe you have some value is undefined
89                 because n > 5.}}
90      \doifemptyelsex{\getvariable{#1}{after#2}}{}
91      \vskip .1\baselineskip\relax
92  }

93  \def\makepapertitle[#1]{\begingroup%
94   \setupindenting[no]%
95   \vbox{\newcount\num_element \num_element=1%start vbox
96   \dorecurse{\getvariable{#1}{n}}%start recurse
97    {\doifemptyelsex{\getvariable{#1}{vspacetyp\romannumeral\num_element}}{}
98     {\definevariable[#1][\getvariable{#1}{typ\romannumeral\num_element}]}
99    \advance\num_element by 1\relax}%stop recurse
100   }%stop vbox
101   \endgroup}
```

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第3部分 定义其后环境所需命令

定义关键词

```
102  \startinterface all
103  \setinterfaceconstant {true}     {true}
104  \setinterfaceconstant {false}     {false}
105  \setinterfaceconstant {answer}    {answer}
106  \setinterfaceconstant {answerstyle} {answerstyle}
107  \setinterfaceconstant {answercolor} {answercolor}
108  \setinterfaceconstant {point}     {point}
109  \setinterfaceconstant {pointstyle} {pointstyle}
110  \setinterfaceconstant {pointcolor} {pointcolor}
111  \stopinterface
```

安装定义命名空间和环境助手

```
112  \installnamespace       {question}
113  \installcommandhandler \????question {question} \????question
114  \installnamespace       {problem}
115  \installcommandhandler \????problem {problem} \????problem
116  \installnamespace       {choice}
117  \installcommandhandler \????choice  {choice}  \????choice
118  \installnamespace       {writing}
119  \installcommandhandler \????writing {writing} \????writing
120  \installnamespace       {subwriting}
121  \installcommandhandler \????subwriting{subwriting}\????subwriting
122  \installnamespace       {answer}
123  \installcommandhandler \????answer  {answer}  \????answer
124  \installnamespace       {close}
125  \installcommandhandler \????close   {close}   \????close
126  \installnamespace       {pitem}
127  \installcommandhandler \????pitem   {pitem}   \????pitem
128  \installnamespace       {citem}
129  \installcommandhandler \????citem   {citem}   \????citem
130  \installnamespace       {ocitem}
131  \installcommandhandler \????ocitem  {ocitem}  \????ocitem
132  \installnamespace       {fillin}
133  \installcommandhandler \????fillin  {fillin}  \????fillin
134  \installnamespace       {material}
135  \installcommandhandler \????material {material} \????material
136  \installcounterassociation {material}
137  \appendtoks
138   \registermaterialcounter\currentmaterial
139   \definecounter[\currentmaterial]%
140  \to \everydefinematerial
141  \appendtoks
142   \synchronizematerialcounters
143  \to \everysetupmaterial
144  \definematerial [material]
145  \definematerial [number]
146  \definematerial [indicator]
```

```
147    \definematerial [indicator_helper]
148    \newif\ifmode_quickcheck \mode_quickcheckfalse
149    \newif\ifmode_check      \mode_checkfalse
150    \newif\ifmode_showanswer \mode_showanswerfalse
151    \newif\ifmode_showpoint  \mode_showpointfalse
152    \newif\ifmode_showscript \mode_showscriptfalse
153    \newif\ifmode_example    \mode_examplefalse
154    \newif\ifenv_question    \env_questionfalse
155    \newif\ifenv_problem     \env_problemfalse
156    \newif\ifenv_choice      \env_choicefalse
157    \newif\ifenv_material    \env_materialfalse
158    \newif\ifenv_close       \env_closefalse
159    \newif\ifenv_writing     \env_writingfalse
160    \newif\ifenv_subwriting  \env_subwritingfalse
161    \newif\ifenv_answer      \env_answerfalse
162    \newif\ifenv_toplevel    \env_topleveltrue
163    \newif\ifenv_botlevel    \env_botlevelfalse
164    \newif\ifitem_pitem      \item_pitemfalse
165    \newif\ifitem_fillin     \item_fillinfalse
166    \newif\ifchoice_check    \choice_checkfalse
167    \newif\ifcontinue_counter \continue_counterfalse
168    \newif\ifclose_counter_reset\close_counter_resetfalse

169    \newdimen\width_cit
170    \newdimen\width_cit_max
171    \newdimen\choice_max_compared_width%
172    \newdimen\width_max_with_label
173    \newdimen\label_width
174    \newcount\totalchoicenumber%
175    \newcount\currentchoicenumber%
176    \newcount\totalpitemnumber%
177    \newcount\currentpitemnumber%
178    \newcount\cnt_step_point% for point calculate
179    \newcount\cnt_step_point_temp%
180    \newcount\current_total_choice_number% 當前選項 ABCD 總計數
181    \newcount\current_available_columns%可排版的最多列數
182    \newcount\cnt_closetest
183    \newcount\cnt_closetest_tempa
184    \newcount\tempa\newcount\tempb
185    \newcount\cnt_example_question

186    \definecounter[Unicode][way=bychapter]
187    \definecounter[Unicode_toplevel]    % for level 1 : question or problem
188    \definecounter[Unicode_midlevel]    % for level 2 : problem or level 1
189    \definecounter[Unicode_botlevel]    % for level 3 : only for level 2
190    \definecounter[totalchoicenumber]    % get total number of choice
191    \definecounter[currentchoicenumber]  % get order number of choice
192    \definecounter[strc_close_counter]   % 为 close 环境可以继续 question 序号而设置
193    \def\EQuestionID{E-\somenamedheadnumber{chapter}{current}-\number\cnt_example_question}
194    \def\QuestionID{\ifmode_example\EQuestionID\else%
195         \somenamedheadnumber{chapter}{current}-\rawcountervalue[Unicode]\fi}
```

```
196  \def\increaseEQuestionID{\advance\cnt_example_question by 1\relax}
197  \def\decreaseEQuestionID{\advance\cnt_example_question by -1\relax}
198  \def\increaseQuestionID{\ifmode_example\increaseEQuestionID\else%
199              \incrementcounter[Unicode]\fi}
200  \def\decreaseQuestionID{\ifmode_example\decreaseEQuestionID\else%
201              \decrementcounter[Unicode]\fi}
202  \def\ProblemID{\namedheadnumber{chapter}-\rawcountervalue[Unicode_toplevel]}
203  \def\SubwritingID{\namedheadnumber{chapter}-\rawcountervalue[Unicode_toplevel]}

204  \definedataset[Answer_collector]
205  \definedataset[Problem_collector]
206  \definedataset[Choice_collector]
207  \definedataset[Subwriting_collector]

208  \defineitemgroup  [env_problem]  %
209  \setupitemgroup   [env_problem] [each] [n,packed,joinedup,nowhite]
210  \defineitemgroup  [env_question]  %
211  \setupitemgroup   [env_question] [each] [n,packed,joinedup,nowhite,continue]
212  \defineitemgroup  [env_choice]  %
213  \setupitemgroup   [env_choice] [each] [A,packed,joinedup,nowhite]
214  \definetextbackground[env_answer]
215  \definebar       [fillin_text]
216  \defineoverlay   [normalframeOL]
217           [\useMPgraphic{normalframeMP}]
218  \startuseMPgraphic{normalframeMP}
219   draw unitsquare xyscaled (\overlaywidth, \overlayheight)
220  \stopuseMPgraphic
221  \startuseMPgraphic{rules:under:wave}
222    vardef lsin primary x =
223      lua("mp.print(math.sin(" & decimal x & "))")
224    enddef ;
225    draw function(1, "x", "lsin(1.2*x)", 0, RuleWidth, .1pt)
226      shifted (0,RuleFactor*RuleOffset+RuleDepth)
227      withpen pencircle scaled RuleThickness
228      withcolor RuleColor ;
229    setbounds currentpicture to unitsquare xysized(RuleWidth,RuleHeight) ;
230  \stopuseMPgraphic
```

需要注意,这些符号需要预先安装字体 NotoSansSymbols2。

\symbol{marksquare}	□	\symbol{markcircle}	○
\symbol{markcheck}	✓	\symbol{markcross}	✗
\symbol{markheavycheck}	✓	\symbol{markheavycross}	✘
\symbol{marksquarecheck}	☑	\symbol{marksquarecross}	☒
\symbol{marksquareheavycheck}	☑	\symbol{marksquareheavycross}	☒
\symbol{markcirclecheck}	⊘	\symbol{markcirclecross}	⊗
\symbol{markcircleheavycheck}	⊘	\symbol{markcircleheavycross}	⊗
\symbol{marknotcheck}	✓		

```
231  \doifelsefontpresent{NotoSansSymbols2-Regular}{}{
232   \writestatus{Warning}{Symbol Font is not Found,Please install NotoSansSymbols2 font.}
233  }
```

```
234  \definefontsynonym[NotoSansSymbols2][file:NotoSansSymbols2-Regular]
235  \def\notosymb#1{\getglyphstyled{NotoSansSymbols2}{\tochar{n:#1}}}

236  \definesymbol[marksquare][\notosymb{}]
237  \definesymbol[markcircle][\notosymb{○}]

238  \definesymbol[marknotcheck][\notosymb{}]
239  \definesymbol[markcheck][\notosymb{}]
240  \definesymbol[markheavycheck][\notosymb{}]
241  \definesymbol[marksquarecheck][\notosymb{\hbox to 1em{\kern-.7em\relax\raise.2em\hbox{}}}]
242  \definesymbol[marksquareheavycheck][\notosymb{\hbox to 1em{\kern-.7em\relax\raise.2em\hbox{}}}]
243  \definesymbol[markcirclecheck][\notosymb{\hbox to 1em{○\kern-.7em\relax\raise.2em\hbox{}}}]
244  \definesymbol[markcircleheavycheck][\notosymb{\hbox to 1em{○\kern-.7em\relax\raise.2em\hbox{}}}]

245  \definesymbol[markcross][\notosymb{}]
246  \definesymbol[markheavycross][\notosymb{}]
247  \definesymbol[marksquarecross][\notosymb{\hbox to 1em{\kern-.75em\relax\raise.1em\hbox{}}}]
248  \definesymbol[marksquareheavycross][\notosymb{\hbox to 1em{\kern-.75em\relax\raise.1em\hbox{}}}]
249  \definesymbol[markcirclecross][\notosymb{\hbox to 1em{○\kern-.75em\relax\raise.2em\hbox{}}}]
250  \definesymbol[markcircleheavycross][\notosymb{\hbox to 1em{○\kern-.75em\relax\raise.2em\hbox{}}}]
251  \def\choice_availablecolumns{\datasetvariable{Choice_collector}{\QuestionID}{availablecolumns}}
252  \def\choice_itemmaxwidth{\datasetvariable{Choice_collector}{\QuestionID}{itemmaxwidth}}
253  \def\choice_totalchoicenumber{\datasetvariable{Choice_collector}{\QuestionID}{totalchoicenumber}}
254  \def\choice_answer{\datasetvariable{Choice_collector}{\QuestionID}{answer}}
255  \def\choice_answerstatus{\datasetvariable{Choice_collector}{\QuestionID}{answerstatus}}
256  \def\pitem_totalnumber{\datasetvariable{Problem_collector}{\ProblemID}{totalpitemnumber}}
257  \def\pitem_totalpoint{\datasetvariable{Problem_collector}{\ProblemID}{totalpitempoint}}
258  \def\answer_id{\datasetvariable{Answer_collector}{\QuestionID}{id}}
259  \def\answer_envid{\datasetvariable{Answer_collector}{\QuestionID}{envid}}
260  \def\answer_order{\datasetvariable{Answer_collector}{\QuestionID}{order}}
261  \def\answer_userorder{\datasetvariable{Answer_collector}{\QuestionID}{userorder}}
262  \def\answer_answer{\ifmode_example You're in EXAMPLE MODE!\else\datasetvariable{Answer_collector}{
263   \QuestionID}{answer}\fi}
264  \def\answer_point{\datasetvariable{Answer_collector}{\QuestionID}{point}}
265  \def\answer_totalnumber{\datasetvariable{Answer_collector}{\QuestionID}{totalnumber}}
266  \def\point_point{\datasetvariable{Answer_collector}{\QuestionID}{point}}
267  \def\show_check_info{
268   \ifmode_quickcheck
269    \par\framed[width=\textwidth,align=flushleft]%
270    {\answer_id\ ** \answer_answer\ ** \mode_status}\par
271   \else%
272     \ifmode_check\show_check_infos\else\fi%
273   \fi}

274  \def\show_check_infos{\begingroup\par\leftskip 0pt\relax\noindent%
275   \setupinterlinespace[line=2ex]%
276   \framed[align=flushleft]{\language[en]%
277    \hfil \ttx {\bf NOTICE: MODE CHECK IS ON}    \hfil\par\ifmode_example
278    \hfil  {\bf NOTICE: MODE EXAMPLE IS ON}    \hfil\par\fi
279    \hfil \ttx Notice,{\bf Cinfos} only show choice env information \hfil\par
280    \hfil  {\bf CU} means 'current' , if CUuserorder ≠ CUorder, \hfil\par
281    \hfil   It maybe because START parameter is enabled.    \hfil\par\ifmode_example
```

```
282    \hfil   Notice,{\bf MODE EXAMPLE} wont provide data infos   \hfil\par\fi
283    \setuptabulate[bodyfont={tt,9pt}]
284    \starttabulate[|rp(.2\textwidth)|lp(.25\textwidth)|rp(.2\textwidth)|lp(.25\textwidth)|lwlB|]
285    \NC {\bf Name}  \NC {\bf Content}      \NC {\bf Cinfos} \NC {\bf Content}      \NC\NR\HL
286    \NC CUitemgroup \NC \currentitemgroup    \NC CUQuestionID \NC \QuestionID       \NC\NR
287    \NC CUparen    \NC \currentparentitemgroup \NC CUCmaxwidth \NC \choice_itemmaxwidth   \NC\NR
288    \NC CUorder    \NC \currentorder      \NC totalCnumber \NC \choice_totalchoicenumber \NC\NR
289    \NC CUuserorder \NC \currentuserorder   \NC Cavailable \NC \choice_availablecolumns \NC\NR
290    \NC answer     \NC \answer_answer     \NC Canswer    \NC \choice_answer        \NC\NR
291    \NC CUpoint    \NC \point_point       \NC         \NC              \NC\NR\HL
292    \NC mode.status \NC \mode_status        \NC CUProblemID \NC \ProblemID         \NC\NR
293    \NC level.check \NC \level_status       \NC totalPnumber \NC \pitem_totalnumber     \NC\NR
294    \NC Canswerstatus \NC \choice_answerstatus  \NC totalPpoint \NC \pitem_totalpoint     \NC\NR
295    \stoptabulate}
296    \par\endgroup}

297  \def\dimtonum #1{\number\numexpr \dimexpr #1\relax*635/65536\relax }
298  \newcount\cnt_floor
299  \def\floor#1{\floorhelper#1.\relax}
300  \def\floorhelper#1.#2\relax{\ifx\relax#2\relax#1%
301   \else\if.#2#1\else\floorhelphelper{#1}#2\fi\fi}
302  \def\floorhelphelper#1#2.{\ifnum#2>0%
303   \floorhelphelphelper#1\relax\relax\relax\else#1\fi}
304  \def\floorhelphelphelper#1#2\relax{%
305   \if-#1\relax-\cnt_floor=0#2\relax%
306   \advance\cnt_floor by 1\relax%
307   \number\cnt_floor\relax%
308   \else\cnt_floor=0#1#2\relax%
309   \number\cnt_floor\relax\fi%
310  }
311  \directlua{MultiAnswerCollector = {}}
312  \def\collect#1{%if want show collect,show #1
313   \directlua{table.insert(MultiAnswerCollector, [[#1]])}}
314  \def\callcollection{\directlua{
315   tex.sprint(table.concat(MultiAnswerCollector, " "))
316   MultiAnswerCollector = {}
317  }}

318  \newcount\c_example_toggle
319  \def\example_toggle[#1]% 专用于测试是否开启了 example mode
320   {\doif{\csname #1parameter\endcsname{example}}{true}%
321     {\mode_exampletrue\global\c_example_toggle=999\relax}}

322  \def\level_status{\ifenv_toplevel <env_toplevel>\else%
323       \ifenv_botlevel <env_botlevel>\else
324          <env_midlevel>\fi\fi}

325  \def\mode_status{ \ifmode_check   <M:C>\fi%check
326       \ifmode_showanswer <M:A>\fi%answer
327       \ifmode_showpoint <M:P>\fi%point
328       \ifmode_example   <M:E>\fi}
```

```
329  \def\currentorder{%              get unique order ( no chapter number )
330    \rawcountervalue[Unicode_toplevel]%-\rawcountervalue[Unicode_midlevel]%
331    \ifnum\rawcountervalue[Unicode_botlevel]=0\relax\else%
332    (\rawcountervalue[Unicode_botlevel])\fi%
333  }

334  \newcount\parentitemnumber

335  \def\set_currentuserorder[#1]{% set order that user setted
336    \ifcsname #1order\endcsname\else%
337    \expandafter\newcount\csname #1order\endcsname\fi%
338    \ifenv_toplevel\csname #1order\endcsname=\currentitemnumber\relax
339    \else     \csname #1order\endcsname=\parentitemnumber \relax
340    \fi}%专为子级设计来获取父级序号，否则直接获取当前序号

341  \def\current_user_order#1{% get user order which can by changed by START
342    \number\csname #1order\endcsname%
343    \ifnum\rawcountervalue[Unicode_botlevel]=0\relax\else%
344    (\rawcountervalue[Unicode_botlevel])\fi}

345  \def\set_count_envlevel[#1][#2]{%
346    \setcounter[Unicode_midlevel][0]%
347    \setcounter[Unicode_botlevel][0]%
348    \doifincsnameelse{#1}{\currentitemgroup}%
349          {\env_topleveltrue{}}%  如果当前环境等于#1 设为顶级
350          {\env_toplevelfalse{}}%
351    \ifenv_toplevel\incrementcounter[Unicode_toplevel]%
352          \else\incrementcounter[Unicode_midlevel]\fi%
353    \set_currentuserorder[#2]% 创建 #2order  以备使用
354    \edef\currentuserorder{\current_user_order{#2}}%获取上面定义的 #2order
355    \show_check_info%
356  }

357  \def\set_count_itemlevel[#1][#2]{%
358    \doifincsnameelse{#1}{\currentitemgroup}%
359          {\env_botleveltrue{}}%
360          {\env_botlevelfalse{}}%
361    \ifenv_botlevel\incrementcounter[Unicode_botlevel]%
362          \else\incrementcounter[Unicode_midlevel]\fi%
363    \set_currentuserorder[#2]%
364    \ifenv_subwriting\env_botleveltrue\else\fi%
365    \edef\currentuserorder{\current_user_order{#2}}%
366    \show_check_info%
367  }

368  \def\dataset_collector[#1][#2]{%#1 where answer from %% #2 user id for the env
369    \def\currentpoint{\csname #1parameter\endcsname{point}}%
370    \setdataset [Answer_collector][\QuestionID]%收集答案并在未来展开
371          [id={\QuestionID},%
372          envid={\currentitemgroup},%
373          order={\number\currentorder},%
374          userorder={\currentuserorder},%
375          answer={\pass_parameter_answer},%
```

```
376          point={\currentpoint},
377          totalnumber={\the\totalpitemnumber},]}
378          % totalnumber 需要修改為根據環境改變所收集的數量信息
379   \def\pass_parameter_answer{%
380    \ifenv_choice%
381     \get_choice_answer%
382    \else%
383     \ifenv_problem%
384      \ifitem_fillin%
385       \get_fillin_answer%
386      \else%
387       \check_parameter_answer[pitem]%
388      \fi%
389     \else%
390      \ifenv_writing%
391       \get_writing_answer%
392      \else%
393       \ifenv_close%
394        \increaseQuestionID%
395        \check_parameter_answer[ocitem]%
396        \decreaseQuestionID%
397       \else%
398        \currentpointoranswer%
399       \fi%
400      \fi%
401     \fi%
402    \fi}

403   \def\check_env_answer[#1][#2][#3]{%
404    \doifsomethingelse{\datasetvariable{#2}{#3}{answer}}%
405    {\datasetvariable{#2}{#3}{answer}}%
406    {\tt no \color[red]{\bf #1 answer} value here,or no need here.}%
407   }

408   \def\check_parameter_answer[#1]{%
409    \doifsomethingelse{\csname #1parameter\endcsname\c!answer}%
410    {\csname #1parameter\endcsname\c!answer}%
411    {\tt no \color[red]{\bf #1 answer} value here,or no need here.}%
412   }

413   \def\get_choice_answer{%
414    \increaseQuestionID%
415    \check_env_answer[choice][Choice_collector][\QuestionID]%
416    \decrementcounter[Unicode]}

417   \def\get_fillin_answer{%
418    \check_env_answer[fillin][Fillin_collector][\QuestionID]%
419   }

420   \def\get_pitem_point{%
421    \def\ProblemID{\namedheadnumber{chapter}-\nextcountervalue[Unicode_toplevel]}%
422    \datasetvariable{Problem_collector}{\ProblemID}{totalpitempoint}}
```

```
423  \def\get_subwriting_point{%
424    \def\SubwritingID{\namedheadnumber{chapter}-\nextcountervalue[Unicode_toplevel]}%
425    \datasetvariable{Subwriting_collector}{\SubwritingID}{totalsubwritingpoint}}

426  \let\getanswerfromchoice\get_choice_answer
427  \let\getanswerfromfillin\get_fillin_answer
428  \let\getpointfrompitem\get_pitem_point
429  \let\getpointfromproblem\get_pitem_point
430  \let\getpointfromsubwriting\get_subwriting_point

431  \def\getanswerforanswer{% used for answer env to auto get answer
432   \ifenv_writing% 因为写作环境的答案一般比较长，在获取答案时，answer 环境会获取显示的很长。
433    \ifx\current_writing_answer\empty%判断环境，并确认 writing 环境是否已经设置 answer 键值
434      \datasetvariable{Answer_collector}{\QuestionID}{answer}%若是，直接获取 writing 环境的
435    \else \current_writing_answer\fi%answer 键值，若否，则按照 QID 获取答案。
436   \else \datasetvariable{Answer_collector}{\QuestionID}{answer}\fi}
437  \def\getpointforanswer{% used for answer env to auto get point
438    \datasetvariable{Answer_collector}{\QuestionID}{point}}

439  \def\check_choice_answerstatus{
440    \ifchoice_check checked!%
441    \else%
442    \color[red]{unchecked!}\\
443    please set the answer manually
444    by add \[*\] parameter to {\tt citem} command.\\
445  \fi}

446  \def\paren#1{(#1)}

447  \def\show_point_or_answer[#1][#2]{%#1 parameter %#2 modename
448    \edef\currentmode{#2}% check point or answer
449    \processaction[\csname #1parameter\endcsname{show#2}][%
450      true=>\csname mode_show#2true\endcsname,
451      false=>\csname mode_show#2false\endcsname,]%
452    \edef\currentpointoranswer{\csname #1parameter\endcsname{#2}}%
453    \csname ifmode_show#2\endcsname%
454      \begingroup%
455      \csname #1parameter\endcsname{#2style}%
456      \switchtocolor[\csname #1parameter\endcsname{#2color}]%
457      \paren {\csname #1parameter\endcsname{#2prelabel}% like=>answer : blabla
458        \ifx\currentmode\c!point% if #2 = point
459          \ifenv_answer%
460            \csname #1parameter\endcsname{#2}%
461          \else%
462          \ifenv_subwriting%
463            \csname #1parameter\endcsname{#2}%
464          \else%
465          \ifenv_writing%
466            \getpointfromsubwriting%
467          \else%
468            \csname #1parameter\endcsname{#2}%
469          \fi%
```

```
470            \fi%
471           \fi%
472          \else% if #2 = answer。因为 currentXXXanswer 是有定义内容的,
473           \ifenv_answer%
474            \answer_answer%
475           \else%
476            \edef\currentanswer{\csname #1parameter\endcsname{#2}}%
477            \ifitem_pitem%
478             \doifsomethingelse{\csname #1parameter\endcsname{#2}}
479               {\currentanswer}
480               {\expandafter\csname set#1parameter\endcsname{#2}{\getanswerfromfillin}%
481                \csname #1parameter\endcsname{#2}}% setXXXparameter 设置键值
482            \else% 如果避免使用 getanswerfromchoice ？？
483             \ifenv_question% 因为没有为 question 设置 dataset, 所以可以直接获取
484              \answer_answer%
485             \else%
486              \ifenv_close%
487               \increaseQuestionID%
488               \answer_answer%选择题想要获取正确序号的答案必须要先增后减
489               \decreaseQuestionID%
490              \else%
491               \currentanswer%
492              \fi%
493             \fi%
494            \fi%
495           \fi%
496          \fi%
497          \csname #1parameter\endcsname{#2label}}%
498        \endgroup%
499      \fi}

500  \defineconversion[tnum][\addff{tabularnumbers}]
501  \def\inherit_itemgroup_option[#1]{
502    \setupcounter [itemgroup:env_#1]
503            [ way=\csname #1parameter\endcsname\c!way]
504    \setupitemgroup[env_#1]
505            [ left=\csname #1parameter\endcsname\c!left,
506             right=\csname #1parameter\endcsname\c!right,
507           stopper=\csname #1parameter\endcsname\c!stopper,
508          distance=\csname #1parameter\endcsname\c!distance,
509            before=\csname #1parameter\endcsname\c!before,
510             after=\csname #1parameter\endcsname\c!after,
511             width=\csname #1parameter\endcsname\c!width,
512             align=\csname #1parameter\endcsname\c!align,
513          indenting=\csname #1parameter\endcsname\c!indenting,
514          symalign=\csname #1parameter\endcsname\c!symalign,
515            symbol=\csname #1parameter\endcsname\c!symbol,
516          itemalign=\csname #1parameter\endcsname\c!itemalign,
517            option=\csname #1parameter\endcsname\c!option,
518             style=\csname #1parameter\endcsname\c!style,
519             color=\csname #1parameter\endcsname\c!color,
```

```
520        numberconversion=\csname #1parameter\endcsname\c!numberconversion,
521              ]%
522    }
```

第4部分 设置 problem 环境

\problem 環境命令可以設置多個聚合問題,該環境具有一個特定的子命令 \pitem 來列明每個問題。可以用來設置填空、問答等題目。

```
\startproblem
\startpitem 該環境位於 \currentitemgroup 。 \stoppitem
\startpitem 該環境位於 \currentitemgroup 。 \stoppitem
\startpitem 該環境位於 \currentitemgroup 。 \stoppitem
\stopproblem
```

---

1. 該環境位於 env_problem:1。
2. 該環境位於 env_problem:1。
3. 該環境位於 env_problem:1。

```
523  \setupproblem [left={}, %%%%% follow is itemize option
524          right={},
525          stopper={.~},
526          distance=.5em,
527          %before=,
528          %after=,
529          width=.5em,
530          %align=,
531          indenting=no,
532          %symalign=,
533          %symbol=,
534          %itemalign=,
535          option={packed,joinedup,nowhite},
536          way=bysection,
537          numberconversion=tnum,]
538  \inherit_itemgroup_option[problem]
```

不同於 \question 環境所有的序號都是連續的,\problem 環境每次開始後都是重新進行計數。

如果想要爲 \problem 環境添加題幹,可以將 \problem 環境放置在 \question 環境之中。

```
\startquestion
  該環境位於 \currentitemgroup 。
    \startproblem[left={(},right={)}},distance=1em,stopper={}]
    \startpitem 該環境位於 \currentitemgroup 。 \stoppitem
    \startpitem 該環境位於 \currentitemgroup 。 \stoppitem
    \startpitem 該環境位於 \currentitemgroup 。 \stoppitem
    \stopproblem
\stopquestion
```

---

1. 該環境位於 env_question:1。
   (1) 該環境位於 env_problem:2。
   (2) 該環境位於 env_problem:2。
   (3) 該環境位於 env_problem:2。

如果想要設置填空題,可以使用 \fillin 命令。同時,\getanswerfromfillin命令會獲取臨近 \fillin 的內容,並輸出爲答案。

```
\setupanswer[showanswer=true]
\startquestion
 該環境位於 \currentitemgroup 。
  \setupitem[answer=\getanswerfromfillin,showanswer=true]
  \startproblem[left={(},right={)},distance=1em,stopper={}]
  \startpitem 該環境位於 \fillin{env_question:1}。 \stoppitem
  \startanswer[answer=\getanswerfromfillin]
    \input knuthmath
  \stopanswer
  \startpitem 該環境位於 \fillin[mp=rules:under:wave]{env_question:1}。 \stoppitem
  \startanswer[answer=\getanswerfromfillin]
    \input knuthmath
  \stopanswer
  \startpitem
    該環境位於 \fillin[empty=number]{env_question:2}。
  \stoppitem
  \startanswer[answer=\getanswerfromfillin]
    \input knuthmath
  \stopanswer
  \startpitem 該環境位於 \fillin[empty=yes]{env_question:3}。 \stoppitem
  \startanswer[answer=\getanswerfromfillin]
    \input knuthmath
  \stopanswer
  \startpitem 該環境位於 \fillin[empty=yes,left={(},right={)}]{env_question:4}。 \stoppitem
  \startanswer[answer=\getanswerfromfillin]
    \input knuthmath
  \stopanswer
  \stopproblem
\stopquestion
```

---

2. 該環境位於 env_question:1。
   (1) (env_question:1) 該環境位於 env_question:1 。
   (2) (env_question:1) 該環境位於 env_question:1 。
   (3) (env_question:2) 該環境位於 3 。
   (4) (env_question:3) 該環境位於_____。
   (5) (env_question:4) 該環境位於((_____))。

```
539  \tolerant\protected\def\startproblem[#1]{%
540  \ifenv_question\increaseQuestionID%如果 problem 作为子环境存在时
541  \parentitemnumber=\currentitemnumber\relax% 直接获取 question 的 ID
542  \set_count_envlevel[env_problem:2][question]%
543  \decreaseQuestionID\fi%
544  \begingroup\env_problemtrue%
545  \iffirstargument\setupproblem[#1]\fi%
546  \startitemgroup [env_problem]%
547          [\problemparameter{numberconversion},#1]%
548          [#1]%
```

```
549    \currentpitemnumber=0\relax%
550    \cnt_step_point=0\relax%
551    \cnt_step_point_temp=0\relax%
552    \ifenv_toplevel\set_count_envlevel[env_problem:1][problem]\fi}

553    \def\stopproblem{
554      \ifnum \totalpitemnumber > \currentpitemnumber%
555          \totalpitemnumber = \totalpitemnumber%
556      \else \totalpitemnumber = \numexpr\currentpitemnumber-1\relax%
557      \fi%遞歸出總序號
558      \setdataset [Problem_collector][\ProblemID]%收集信息並在未來展開
559            [totalpitemnumber={\the\totalpitemnumber},
560             totalpitempoint={\number\cnt_step_point},]%
561      \stopitemgroup%
562      \endgroup}
```

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第5部分 设置 question 环境

`\question` 環境命令可以用來設置題幹。只需將題幹包裹在 `\startquestion` `\stopquestion` 命令之間即可。

```
\startquestion
  該環境位於 \currentitemgroup 。
\stopquestion
\startquestion
  該環境位於 \currentitemgroup 。
\stopquestion
```

3. 該環境位於 env_question:1。
4. 該環境位於 env_question:1。

`\question` 環境命令繼承了大部分 `\itemgroup` 環境的選項設置。因此,可以像修改 `\itemgroup` 一樣,使用 `\setupquestion` 來修改該環境。

```
\setupquestion[color=green,style=\ss,start=22]
\startquestion
  該環境位於 \currentitemgroup 。
\stopquestion
```

1. 該環境位於 env_question:1。

question 环境可以设置**答案**和**分值**。该键值详细的设置如下:

showanswer	answer	answerstyle answerprelabel	answercolor answerlabel
showpoint	point	pointstyle pointprelabel	pointcolor pointlabel

```
\startquestion[showpoint=true,point=5,pointlabel={points},
        showanswer=true,answer={new answer},answerstyle={\tt},]
  該環境位於 \currentitemgroup 。
\stopquestion
```

2. (5points)(A C) 該環境位於 env_question:1。

此外,question 設置了一个特殊的键值 example=true,可以是当前题目不被录入答案。在(v20241023)中,通过不太正常的方式設置了 example 后的题目可以自动重置回到序数 1。或许,可以设置一个新的键值,来设定 example 之后的题目是重置为 1 还是接续上一个序号。此外,由于 question 內置了一个 item,因此可以使用 reference 来创建引用。

關於 point 和 answer 的設定: point 的分值默認是一整個題目的總分數。如果當前字環境為 problem,只要為每個 pitem 設計了 point 的分值,該模塊就會自動計算,並通過 `\getpointfrompitem` 來獲取計算後的 point。answer 的獲取也是一樣。可以通過 `\getanswerfromchoice` 來獲取當前環境的選項答案。需要注意的是,並沒有設計 `\getanswerfrompitem`。在設計時, pitem 默認是擁有多個同級項目的。也就是說,會在同一個 question 環境中,有多個子答案。我們無法獲知應該使用哪一個作為當前環境的答案。同樣的道理,每個 question 環境內只有一個 choice 環境,只需要直接為 question 環境配置分值即可。choice 環境並不能配置分數。

```
563    \setupquestion [%showpoint=false,
564          %point=,
565          pointstyle=\ttx,
566          %pointcolor=,
567          %pointprelabel=,
568          pointlabel={分},
569          %showanswer=false,
570          %answer=,
571          %answerlabel=,
572          %answerprelabel=,
573          answerstyle=\ss,
574          answercolor=red,
575          %example=,
576          left={}, %%%%% follow is itemize option
577          right={},
578          stopper={.~},
579          distance=0em,
580          option={packed,joinedup,nowhite},
581          %before=,
582          %after=,
583          width=1.5em,
584          %align=,
585          indenting=no,
586          %symalign=,
587          %symbol=,
588          %itemalign=,
589          way=bychapter,%wont work if continue on
590          numberconversion=tnum,]
591    \inherit_itemgroup_option[question]

592    \tolerant\protected\def\startquestion[#1]{\begingroup%
593      \env_questiontrue%
594      \global\c_example_toggle=0\relax
595      \iffirstargument\setupquestion[#1]\fi%
596      \example_toggle[question]%
597      \ifempty{\questionparameter{start}}% 避免 continue 和 start 属性冲突
598      \startitemgroup[env_question]%
599            [\questionparameter{numberconversion},continue,#1]%
600            [#1]%
601    \else\startitemgroup[env_question]%
602            [\questionparameter{numberconversion},#1]%
603            [#1]%
604    \fi\item[\questionparameter\c!reference]%
605    \show_point_or_answer[question][point]%
606    \increaseQuestionID%让 question 获取下一个 QID 的答案。
607    \show_point_or_answer[question][answer]%因为 question 本身不具备答案
608    \parentitemnumber=\currentitemnumber\relax
609    \set_count_envlevel[env_question:1][question]%
610    \setcounter    [strc_close_counter][\currentitemnumber]%
611    \savecounter   [strc_close_counter]%
612    \decreaseQuestionID%
```

```
613        \unskip}

614    \def\stopquestion{\stopitemgroup\endgroup%
615            \ifnum\c_example_toggle=999\relax%
616            \resetcounter [itemgroup:env_question]%
617            \fi}
```

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第6部分　设置 choice 环境

該環境命令只能置於 \question 環境之下。該環境有一個子項目： \startcitem \stopcitem。

```
\startcitem {選項內容} \stopcitem
```

可以通過 [*] 來標記正確答案。如果想要設置多選題,只需要對每個正確答案添加 [*] 即可。

```
\setupquestion[showanswer=true]
\startquestion[answer=\getanswerfromchoice]
  該環境位於 \currentitemgroup 。
  \startchoice
    \startcitem[*]{Some Words}\stopcitem
    \startcitem{Some Words}\stopcitem
    \startcitem[*]{Some Words}\stopcitem
    \startcitem{Some Words}\stopcitem
  \stopchoice
\stopquestion
\startquestion[answer=\getanswerfromchoice]
  該環境位於 \currentitemgroup 。
  \startchoice
    \startcitem{Some More Words}\stopcitem
    \startcitem{Some More Words}\stopcitem
    \startcitem[*]{Some More Words}\stopcitem
    \startcitem[*]{Some More Words}\stopcitem
  \stopchoice
\stopquestion
\startquestion[answer=\getanswerfromchoice]
  該環境位於 \currentitemgroup 。
  \startchoice
    \startcitem{Some More More Words}\stopcitem
    \startcitem[*]{Some More More Words}\stopcitem
    \startcitem{Some More More Words}\stopcitem
    \startcitem[*]{Some More More Words}\stopcitem
  \stopchoice
\stopquestion
```

3. (A C) 該環境位於 env_question:1。
   A. Some Words　　　　B. Some Words　　　C. Some Words　　　D. Some Words
4. (C D) 該環境位於 env_question:1。
   A. Some More Words　　B. Some More Words　　C. Some More Words　　D. Some More Words
5. (B D) 該環境位於 env_question:1。
   A. Some More More Words　　　　　　B. Some More More Words
   C. Some More More Words　　　　　　D. Some More More Words

同時為 \startcitem\stopcitem 定義了同義命令 \citem 和 \fragilecitem。\fragilecitem命令可以不通過界定花括號來排版選項,但可能會引發未知問題,特別是選項中含有空格時。\citem 則需要將選項包裹在花括號中。

```
\citem {選項內容}
\fragilecitem 選項內容
```

该环境继承了一部分 itemgroup 的键值,就如同前两个命令一样。不同于 question 具有 answer 和 point 两种键值,该环境只具有 answer 相关的键值,来特别地设置是否显示答案和配置答案样式。因为 choice 环境的特殊性,point 键值通过 question 环境来显示。和 question 環境的區別是 question 環境的 answer 控制答案是否显示在题干以及设置相关样式。choice 环境的 answer 控制答案是否显示在选项以及设置相关样式。

另 外 ,choice 環 境 有 一 個 特 别 的 值 : maxiwidth key is for calcaluted max width of choice and waited to be compare, notice this key is maxiwidth ,and difference from maxwidth which for setupitemgroup command

```
618  \setupchoice [answer=\get_choice_answer,
619        answerstyle=\ss\tf,
620        answercolor=red,
621        left={}, %%%%% follow is itemize option
622        right={},
623        stopper={.~},
624        distance=.5em,
625        option={packed,joinedup,nowhite},
626        %before=,
627        %after=,
628        width=1em,
629        maxiwidth=.8\textwidth,
630        start=1,
631        %align=,
632        indenting=no,
633        %symalign=,
634        %symbol=,
635        %itemalign=,
636        way=bysection,
637        numberconversion=A,]
638  \inherit_itemgroup_option[choice]

639  \tolerant\protected\def\startchoice[#1]{\begingroup%
640    \env_choicetrue%
641    \increaseQuestionID%
642    \doifelsesomething{\datasetvariable{Choice_collector}%
643          {\QuestionID}{totalchoicenumber}}% arg_1
644      {\scratchcounter\datasetvariable{Choice_collector}%
645          {\QuestionID}{totalchoicenumber}}% arg_2
646          {\scratchcounter\zerocount}% arg_3
647    \current_total_choice_number=\number\scratchcounter\relax%
648    \doifelsesomething{\datasetvariable{Choice_collector}
649          {\QuestionID}{availablecolumns}}%
650      {\scratchcounter\datasetvariable{Choice_collector}
651          {\QuestionID}{availablecolumns}}%
652          {\scratchcounter\zerocount}%
653    \current_available_columns=\number\scratchcounter\relax%
654    \startluacode
655    tbl_num_temp = {"one","two","three","four",
656          "five","six","senven","eight","nine"}
657    local  tbl_cit_count    = tex.count['current_total_choice_number']
658    local  available_columns = tex.count['current_available_columns']
659        available_columns_arg = ""
```

```
660    if  (tbl_cit_count == 3) and (available_columns < tbl_cit_count)
661    then  available_columns_arg = "one"
662    elseif (tbl_cit_count > 1) and (available_columns >= tbl_cit_count)
663    then  available_columns_arg = "horizontal," .. tbl_num_temp[tbl_cit_count]
664    elseif (tbl_cit_count >= 1) and (available_columns <=      1 )
665    then  available_columns_arg = "one"
666    else  available_columns_arg = "horizontal,two"
667    end
668    \stopluacode
669    \iffirstargument\setupchoice[#1]\fi%
670    \startitemgroup[env_choice]%
671            [\choiceparameter{numberconversion},#1,%
672             \ctxlua{context(available_columns_arg,"")},]%
673            [#1]%
674    \processaction[\choiceparameter{showanswer}][%
675         true=>\mode_showanswertrue,
676         false=>\mode_showanswerfalse,]%
677    \totalchoicenumber=0\relax%
678    \currentchoicenumber=0\relax%
679    \show_check_info
680    \setcounter  [totalchoicenumber]  [0]% recalculator when startitemgroup
681    \setcounter  [currentchoicenumber] [0]% recalculator when startitemgroup
682    }

683  \def\stopchoice{%
684    \width_max_with_label = \dimexpr\width_cit_max + %
685             \d_strc_itemgroups_list_width\relax%
686    \currentchoicenumber=\numexpr\currentchoicenumber-1\relax%
687    \ifnum \totalchoicenumber > \currentchoicenumber%
688       \totalchoicenumber = \totalchoicenumber%
689    \else \totalchoicenumber = \currentchoicenumber%
690    \fi%遞歸出總序號
691    \choice_max_compared_width=\choiceparameter{maxiwidth}\relax%
692    \tempa   =\dimtonum{\choice_max_compared_width}\relax%
693    \tempb   =\dimtonum{\the\width_max_with_label}\relax%
694    \ifdefined \currentuserorder\else%
695        \doifincsnameelse{env_choice:2}{\currentitemgroup}%
696         {}{\set_count_envlevel[env_choice:1][choice]}\fi%
697    \setdataset [Choice_collector][\QuestionID][%收集選項信息,傳遞給下面的總收集處
698            id={\QuestionID},%
699            envid={\currentitemgroup},%
700            order={\number\currentorder},%
701            userorder={\currentuserorder},%
702            availablecolumns={\number\numexpr \tempa / \tempb\relax},
703            itemmaxwidth={\the\width_cit_max},
704            totalchoicenumber={\number\totalchoicenumber},
705            point={\questionparameter\c!point},
706            answerstatus={\check_choice_answerstatus},
707            answer={\callcollection},]%
708    \dataset_collector[question][choice]%
709    \stopitemgroup\endgroup}
```

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第7部分　设置 writing 环境

目前该环境只是初步的设计。如果只有同级的多个作文题目,只需要使用 writing 环境即可。但是,当一个作文体下面有多个子题目时,需要将子题目放到 subwriting 环境当中。

该环境目前关于 itemgroup 的设置是直接继承自 question 环境。直接通过 \setupquestion 来进行设置皆可。

如果含有 subwriting 环境,可以使用 \getanswerfromsubwriting 来获取总分数。

```
\setupwriting[showanswer=true,showpoint=true]
\startwriting[point=45]
 作文题目说明
 \startanswer
  参考作文 1
 \stopanswer
\stopwriting

\startwriting[point=\getpointfromsubwriting]
作文题目说明
 \startsubwriting[point=450]
  sub 作文题目说明
  \startanswer
   参考作文 2
  \stopanswer
 \stopsubwriting
 \startsubwriting[point=4588]
  sub 作文题目说明
  \startanswer
  参考作文 3
  \stopanswer
 \stopsubwriting
\stopwriting
```

6. (45分)(参见参考作文。) 作文题目说明

   答案: (45分)
   参考作文 1

7. (5038分)(参见参考作文。) 作文题目说明
   1. (450分)(参见参考作文。) sub 作文题目说明

      答案: (450分)
      参考作文 2

   2. (4588分)(参见参考作文。) sub 作文题目说明

      答案: (4588分)
      参考作文 3

710 \setupwriting[answer={参见参考作文。 },pointlabel={分}]

711 \setupsubwriting[answer={参见参考作文。 },point=0,pointlabel={分}]

712 **\tolerant\protected\def**\startwriting[#1]{**\begingroup**%

```
713    \env_writingtrue%
714    \setupanswer[showanswer=false]%
715    \iffirstargument\setupwriting[#1]\fi%注意，writing 没有单独的 itemgroup 环境
716    \ifempty{\questionparameter{start}}% 避免 continue 和 start 属性冲突
717    \startitemgroup[env_question]% 该环境的 item 样式通过 question 来进行设置即可
718              [\questionparameter{numberconversion},continue,#1]%
719              [#1]%
720    \else\startitemgroup[env_question]%
721              [\questionparameter{numberconversion},#1]%
722              [#1]%
723    \fi\item[\writingparameter\c!reference]%
724    \show_point_or_answer[writing][point]%
725    \show_point_or_answer[writing][answer]%
726    \def\current_writing_answer{\writingparameter\c!answer}
727    \increaseQuestionID%不同于 question 环境，此处只增长不缩减
728    \parentitemnumber=\currentitemnumber\relax
729    \cnt_step_point=0\relax%
730    \cnt_step_point_temp=0\relax%
731    \set_count_envlevel[env_question:1][writing]%
732    \setcounter  [strc_close_counter][\currentitemnumber]%
733    \savecounter  [strc_close_counter]%
734    \unskip}

735    \def\stopwriting{%
736    \ifnum\cnt_step_point=0\relax
737     \edef\currentwritingpoint{\writingparameter\c!point}%
738    \else%
739     \edef\currentwritingpoint{\number\cnt_step_point}%
740    \fi%
741    \setdataset  [Subwriting_collector][\SubwritingID]%only for total point
742          [totalsubwritingpoint={\currentwritingpoint},
743           totalsubwritingitem={\rawcountervalue[Unicode_botlevel]}]
744    \ifenv_subwriting\else%
745    \dataset_collector[writing][question]\fi%
746    \stopitemgroup\endgroup}

747    \tolerant\protected\def\startsubwriting[#1]{%
748    \env_subwritingtrue\begingroup\env_toplevelfalse%
749    \iffirstargument\setupsubwriting[#1]\fi
750    \ifempty{\questionparameter{start}}% 避免 continue 和 start 属性冲突
751      \startitemgroup[env_question]% 该环境的 item 样式通过 question 来进行设置即可
752              [\questionparameter{numberconversion},continue,#1]%
753              [#1]%
754    \else\startitemgroup[env_question]%
755              [\questionparameter{numberconversion},#1]%
756              [#1]%
757    \fi%
758    \item \show_point_or_answer[subwriting][point]%
759      \show_point_or_answer[subwriting][answer]%
760      \def\current_writing_answer{\subwritingparameter\c!answer}%
761      \ifnum\currentitemnumber=1\relax
```

```
762         \decreaseQuestionID\increaseQuestionID%
763       \else\increaseQuestionID\fi%
764     %当具有多个子写作环境时，才增长 QID ，否则削减至父级 QID（相当于继承）
765       \set_count_itemlevel[env_question:2][subwriting]%
766       \setcounter   [strc_close_counter][\currentitemnumber]%
767       \savecounter  [strc_close_counter]%
768       \global\cnt_step_point_temp=\subwritingparameter\c!point\relax%
769       \ifnum\cnt_step_point=0%
770           \global\cnt_step_point=\cnt_step_point_temp\relax%
771       \else%
772           \global\cnt_step_point=\numexpr\cnt_step_point+\cnt_step_point_temp\relax%
773       \fi
774     }
775 \def\stopsubwriting{\dataset_collector[subwriting][subwriting]\stopitemgroup\endgroup}
```

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第8部分　设置 answer 环境

在(v20241023)中,删除了 answer 环境的标签通过 description 来进行设置。整体环境通过 textbackground 环境进行设置。该环境具有 answer 和 point 的全部键值。同时,通过 label labelstyle labelcolor 来设置答案环境的标签。此外,還提供了一個特殊的鍵值 sctipt,該鍵值主要用於創建答題區域。該鍵值和 answer 鍵值是互斥的,不應該同時啟用。

\answer 是爲師生兩版設置的命令。但目前該命令和相關設置還具有諸多不足之處。只需要將該環境置於題目下方,即可獲取當前題目設定

```
\startquestion[showanswer=true,answer={answer for \currentitemgroup }]
  該環境位於 \currentitemgroup 。注意：\tex{answer} 可以獲取父環境或同級環境的答案而不必再次設置。
  \startanswer[point=12]
  \input knuthmath
  \stopanswer
\stopquestion
\startquestion[showanswer=true,answer=\getanswerfromchoice]
  該環境位於 \currentitemgroup 。注意：\tex{answer} 可以獲取父環境或同級環境的答案而不必再次設置。
  \startchoice
    \startcitem{Some Words}\stopcitem
    \startcitem{Some Words}\stopcitem
    \startcitem[*]{Some Words}\stopcitem
    \startcitem{Some Words}\stopcitem
  \stopchoice
  \startanswer[point=1]
  \input knuthmath
  \stopanswer
\stopquestion
```

8. (C) 該環境位於 env_question:1。注意：\answer 可以獲取父環境或同級環境的答案而不必再次設置。

   答案: (12分)(參考作文 3)
   Many readers will skim over formulas on their first reading of your exposition. Therefore, your sentences should flow smoothly when all but the simplest formulas are replaced by "blah" or some other grunting noise.

9. (C) 該環境位於 env_question:1。注意：\answer 可以獲取父環境或同級環境的答案而不必再次設置。
   A. Some Words　　　　B. Some Words　　　　C. Some Words　　　　D. Some Words

   答案: (1分)(C)
   Many readers will skim over formulas on their first reading of your exposition. Therefore, your sentences should flow smoothly when all but the simplest formulas are replaced by "blah" or some other grunting noise.

```
\startquestion[showanswer=true]
 該環境位於 \currentitemgroup 。
 \startproblem[showanswer=true,left={(},right={)},distance=1em,stopper={}]
 \startpitem[showanswer=true,answer={Pitem 1}] 該環境位於 \currentitemgroup 。 \stoppitem
 \startanswer[point=10]
 \input knuthmath
 \stopanswer
```

```
        \startpitem[showanswer=true,answer={Pitem 2}] 該環境位於 \currentitemgroup 。 \stoppitem
        \startanswer[point=20]
        \input knuthmath
        \stopanswer
        \startpitem[showanswer=true,answer={Pitem 3}] 該環境位於 \currentitemgroup 。 \stoppitem
        \startanswer[point=30]
        \input knuthmath
        \stopanswer
        \stopproblem
    \stopquestion
```

10. (Pitem 1) 該環境位於 env_question:1。

   (1) (Pitem 1) 該環境位於 env_problem:2。

  答案: (10分)(Pitem 1)

Many readers will skim over formulas on their first reading of your exposition. Therefore, your sentences should flow smoothly when all but the simplest formulas are replaced by "blah" or some other grunting noise.

   (2) (Pitem 2) 該環境位於 env_problem:2。

  答案: (20分)(Pitem 2)

Many readers will skim over formulas on their first reading of your exposition. Therefore, your sentences should flow smoothly when all but the simplest formulas are replaced by "blah" or some other grunting noise.

   (3) (Pitem 3) 該環境位於 env_problem:2。

  答案: (30分)(Pitem 3)

Many readers will skim over formulas on their first reading of your exposition. Therefore, your sentences should flow smoothly when all but the simplest formulas are replaced by "blah" or some other grunting noise.

```
776  \setuptextbackground[env_answer]
777          [location=paragraph,width=local,
778          leftoffset=1ex,rightoffset=1ex,
779          %topoffset=.5ex,bottomoffset=.5ex,
780          before={\leftskip=0pt\startnarrower
781              \blank[force,halfline]},
782          after={\blank[halfline]\stopnarrower},
783          background=\answerparameter\c!background,
784          backgroundcolor=\answerparameter\c!backgroundcolor,
785          corner=\answerparameter\c!corner,
786          frame=\answerparameter\c!frame,
787          framecolor=\answerparameter\c!framecolor,
788          rulethickness=\answerparameter\c!rulethickness,
789          ]

790  \setupanswer[showanswer=true,
791      showpoint=true,
792      answer=\getanswerforanswer,
793      point=\getpointforanswer,
```

```
794        pointlabel={分},
795        pointstyle=\answerparameter{style},
796        pointcolor=\answerparameter{color},
797        answerstyle=\answerparameter{style},
798        answercolor=\answerparameter{color},
799        style=\ss,
800        labelstyle=\ss,
801        label={答案：},
802        %before=,
803        %after=,
804        afteranswer={\par},
805        showscript=false,
806        %scriptcontent={},
807        %scriptbefore={},
808        %scriptafter={},
809        background=normalframeOL,
810        %backgroundcolor=,
811        %corner=,
812        %frame=,
813        %framecolor=,
814        %rulethickness=,
815        ]

816  \tolerant\protected\def\startanswer[#1]#:#2\stopanswer{\begingroup%
817    \env_answertrue%
818    \xdef\get_writing_answer{#2}% only for writing env
819    \iffirstargument\setupanswer[#1]\fi%
820    \doif{\answerparameter{showscript}}{true}{\mode_showscripttrue}%
821    \answerparameter{before}%
822    \ifmode_showanswer%
823      \startenv_answer%
824        {\answerparameter{labelstyle}%
825        \switchtocolor[\answerparameter{labelcolor}]%
826        \answerparameter{label}}%
827      \show_point_or_answer[answer][point]%
828      \show_point_or_answer[answer][answer]%
829      \useanswerstyleandcolor\c!style\c!color%
830      \answerparameter{afteranswer}#2
831    \stopenv_answer%
832    \else%
833    \ifmode_showscript%
834    \startenv_answer%
835     \answerparameter{scriptbefore}%
836      \answerparameter{scriptcontent}%
837      \answerparameter{scriptafter}%
838    \stopenv_answer%
839    \else\fi%
840    \fi%
841    \answerparameter{after}%
842    \endgroup}
```

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第9部分 设置 pitem,citem 命令

仅具有 answer point 和 reference 键值。

pitem 项目下如果含有 fillin 命令,可以通过 \getanswerfromfillin 來獲取答案請注意,不要同時為單個 pitem 或者 fillin 命令同時設置答案,這可能會引起答案無法正確獲取。

```
843  \setuppitem  [%showpoint=false,
844        point=0,% 必須有預設值，否則出現計數器錯誤(missing number)
845        pointstyle=\ttx,
846        %pointcolor=,
847        pointlabel={分},
848        %showanswer=false,
849        %answer=,
850        answerstyle=\ss,
851        answercolor=red,
852        %reference=,
853        ]
854  \tolerant\protected\def\startpitem[#1]{\begingroup%
855   \item_pitemtrue\increaseQuestionID%
856   \iffirstargument\setuppitem[#1]\fi%
857    \startitem[\pitemparameter{reference}]%%
858     \ifnum\currentpitemnumber=0\currentpitemnumber=1\relax\fi%
859      \show_point_or_answer[pitem][point]%
860      \show_point_or_answer[pitem][answer]%
861     \set_count_itemlevel[env_problem:2][pitem]%
862     \global\cnt_step_point_temp=\pitemparameter{point}\relax%
863     \ifnum\cnt_step_point=0%
864      \global\cnt_step_point=\cnt_step_point_temp\relax%
865     \else%
866      \global\cnt_step_point=\numexpr\cnt_step_point+\cnt_step_point_temp\relax%
867     \fi}

868  \def\stoppitem{%
869   \dataset_collector[pitem][pitem]%
870   \stopitem\global\advance\currentpitemnumber by 1\relax
871   \endgroup}
```

choice 只具有 showanswer 和 [*](用于标记正确答案) 两个设置

```
872  \def\correct_choice#1#2{%
873   \ifmode_showanswer%
874    \doif{#1}{*}{%
875     {\doifelse{\choiceparameter{answerstyle}}{}%
876         {\choiceparameter{answerstyle}}%
877         {\questionparameter{answerstyle}}%
878      \doifelse{\choiceparameter{answercolor}}{}{}%
879         {\switchtocolor[\choiceparameter{answercolor}]}%
880         {\switchtocolor[\questionparameter{answercolor}]}}%
881     #2}}%%correct choice
882   \else#2\fi}
883  \def\get_citem_text[#1]{\setbox0=\hbox{#1}%
```

```
884    \width_cit = \the\wd0\relax%relax is neccessary
885    \ifdim \width_cit_max > \width_cit%
886        \width_cit_max = \width_cit_max%
887    \else \width_cit_max = \width_cit%
888    \fi}%%%% 遞歸計算出最大寬度

889    \tolerant\protected\def\startcitem[#1]#*[#2]#:#3\stopcitem{% #1 correct answer
890        \ifsecondargument\setupcitem[#2]\fi%   #2 options
891    \get_citem_text[#3]%            #3 choice content
892    \processaction[\choiceparameter{showanswer}][%
893        true=>\mode_showanswertrue,
894       false=>\mode_showanswerfalse,]%
895    \doif{#1}{*}{\choice_checktrue}%
896    \ifconditional\c_strc_itemgroups_horizontal% mode_horizontal
897     \ifnum\currentchoicenumber<1%
898     \currentchoicenumber = 1\relax%
899     \else\relax\fi%
900     \setcounter[currentchoicenumber][\currentchoicenumber]%
901     \setcounter[totalchoicenumber][\currentchoicenumber]%
902     \doif{#1}{*}{\savecounter[currentchoicenumber]}%
903     %if new collect command work well, savecounter can be deleted
904     \doif{#1}{*}{\collect{\convertnumber%
905            {\choiceparameter{numberconversion}}%
906            {\currentchoicenumber}}}%
907    \else%
908     \ifnum\currentchoicenumber<1\relax%
909     \currentchoicenumber=1\relax%
910     \else\relax\fi%
911    \fi%
912    \startitem[\citemparameter\c!reference]
913    \ifconditional\c_strc_itemgroups_horizontal% mode_horizontal
914    \doifelse{#1}{*}{\correct_choice{#1}{#3}}{#3}%
915    \else%
916     \setcounter[currentchoicenumber][\currentchoicenumber]%
917     \setcounter[totalchoicenumber][\currentchoicenumber]%
918    \doifelse{#1}{*}{\correct_choice{#1}%
919    {#3\savecounter[currentchoicenumber]}}%
920    {#3%if new collect command work well, savecounter can be deleted
921    \doif{#1}{*}{\collect{\convertnumber%
922            {\choiceparameter{numberconversion}}%
923            {\currentchoicenumber}}}%
924    \fi%
925    \stopitem%
926    \advance\currentchoicenumber by 1\relax%
927    }
```

第10部分　定义同义命令

```
928    \def\pitem{\dosingleempty\pitem_indeed}
929    \def\pitem_indeed[#1]#2{
930      \startpitem[#1]{#2}\stoppitem
931    }
932    \def\citem{\dosingleempty\citem_indeed}
933    \def\citem_indeed[#1]#2{%
934      \startcitem[#1]{#2}\stopcitem%
935    }
```

谨慎使用下面的 fragilecitem,他并不安全。很有可能导致错误

```
936    \bgroup
937    \obeylines
938    \gdef\xcitem{\bgroup\obeylines\dosingleempty\doxcitem}%
939    \gdef\doxcitem[#1]#2
940      {\egroup%
941      \doifsomethingelse{#1}%
942      {\startcitem[#1]#2\stopcitem}%
943      {}%
944      \startcitem #2\stopcitem}%
945    \egroup

946    \let\fragilecitem\xcitem
```

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第11部分 設置 fillin 命令

該命令建議在 pitem 環境內進行使用。同時,為 pitem 的 answer 鍵設置 \getanswerfromfillin,這樣 pitem 命令就可以自動獲取內部的 fillin 命令的答案當然,同時由於 pitem 本身也有 answer 鍵值,可以通過該鍵值進行設定。

fillin 命令主要依靠 bar 命令實現的。基本上按照修改 bar 命令即可修改 fillin 命令。fillin 命令有兩個參考 textnote 的參數: empty 和 n。empty=yes,隱藏答案;empty=number 顯示數字; empty=none 顯示答案。n=* 隱藏答案; n=NUMBER 控制 bar 的長度。

bar 主要有四種樣式,可以通過 mp 參數進行設置: rules:under:dots rules:under:dash

```
947  \definedataset[Fillin_collector]
948  \setupbar[fillin_text]
949       [ rulethickness=\fillinparameter{rulethickness},
950      foregroundcolor=\fillinparameter{foregroundcolor},
951       foregroundstyle=\fillinparameter{foregroundstyle},
952           continue=\fillinparameter{continue},
953             unit=\fillinparameter{unit},
954            order=\fillinparameter{order},
955           method=\fillinparameter{method},
956               dy=\fillinparameter{dy},
957              max=\fillinparameter{max},
958            width=\fillinparameter{width},
959             left=\fillinparameter{left},
960            right=\fillinparameter{right},
961           repeat=\fillinparameter{repeat},
962            color=\fillinparameter{color},
963           offset=\fillinparameter{offset},
964            empty=\fillinparameter{empty},
965               mp=\fillinparameter{mp}]
966  \setupfillin[%foregroundcolor=,
967          %before=,after=,
968          %left=,right=,
969          %repeat=,mp=
970          rule=fillin_text,% 引用 bar 命令
971          empty=none,
972          continue=yes,
973          unit=em,
974          order=foreground,
975          method=0,
976          %color=gray,
977          width=4em,
978          n=10,
979          dy=-0.4,
980          max=3,
981          offset=-.1,
982          rulethickness=.05,
983          foregroundstyle=\ss,]

984  \def\showanswer_for_fillin{%
985    \ifmode_showanswer\setupfillin[empty=none]%
```

```
986    \else\setupfillin[empty=yes]\fi}
987    \newcount\c_fillin_number

988    \tolerant\protected\def\fillin[#1]#:#2{%
989      \item_pitemfalse\item_fillintrue%
990      \begingroup%
991      \iffirstargument\setupfillin[#1]\fi%
992      \removeunwantedspaces%
993      \global\advance\c_fillin_number by 1\relax
994      \edef\p_n{\fillinparameter\c!n}%
995      \edef\p_empty{\fillinparameter\c!empty}%
996      \edef\p_number{\number\c_fillin_number}%
997      \edef\currentbar{\fillinparameter\c!rule}%
998      \showanswer_for_fillin%
999      \fillinparameter\c!before\fillinparameter\c!left%
1000     \ifx\p_n\wildcardsymbol
1001       \donefalse
1002       \ifx\p_empty\v!yes
1003         \donetrue
1004       \else\ifx\p_empty\v!number
1005         \donetrue
1006       \else\ifx\p_empty\v!none
1007         \donetrue
1008       \fi\fi\fi
1009       \ifdone
1010         \setupbar[\currentbar][\c!empty=\v!yes]%
1011       \fi%
1012       \inlinebar[\currentbar]\bgroup
1013         \wordboundary#2%
1014         \ifx\p_empty\v!yes
1015         \else\ifx\p_empty\v!number
1016         \else\ifx\p_empty\v!none
1017         \fi\fi\fi
1018       \egroup
1019     \else
1020       \inlinebar[\currentbar]\bgroup
1021         \wordboundary
1022         \scratchcounter\numexpr\p_n\relax
1023         \ifx\p_empty\v!yes
1024           \interwordspacesbefore\scratchcounter
1025           \interwordspacesafter\scratchcounter
1026         \else\ifx\p_empty\v!number
1027           \interwordspacesbefore\scratchcounter
1028           \zwnj\runninghbox{\resetbar\p_number}\zwnj
1029           \interwordspacesafter\scratchcounter
1030         \else\ifx\p_empty\v!none
1031           \scratchcounter\numexpr\p_n/\plustwo\relax
1032           \interwordspacesbefore\scratchcounter
1033           \zwnj\runninghbox{\resetbar{#2}}\zwnj
1034           \interwordspacesafter\scratchcounter
1035         \else
```

```
1036        #2%
1037      \fi\fi\fi%
1038     \egroup%
1039    \fi%
1040  \setdataset[Fillin_collector][\QuestionID][answer={#2}]%
1041  \fillinparameter\c!right\fillinparameter\c!after%
1042  \endgroup}
```

Memoir Ever

第12部分 設置 material 環境

顧名思義,\material 環境用來放置大段文本材料。該環境比較特殊,它設置了多個子實例來進行更完善的設置。除了 \setupmaterial[number] 這個實例繼承了 \setupcounter 的全部鍵值之外,其他實例都是新定義的鍵值。

這些實例分別是:
· \setupmaterial[number] 設置該環境標題的**序號**;
· \setupmaterial[title] 設置該環境的**標題**相關的樣式;
· \setupmaterial[author] 設置該環境文章的**作者**相關的樣式;
· \setupmaterial[source] 設置該環境文章的**具體來源**的相關樣式。
· \setupmaterial[indicator] 設置該環境文章的**畫線序號文字**的相關樣式。

此外,title,author,source 的名稱是通過 \setupmaterial 來直接設置。此外,該環境具有一個特殊的子命令 \indicator 來標記文章中的提問的部分並進行添加數字標識—(一)畫線文字。因此,\setupmaterial 還具有一個鍵值 indicator 通過 indicator=reset 對 indicator 進行重置,每當開啓一個新的 material 環境。通過 indicator=continue 對 indicator 取消重置,它將持續計數。當然,也可以直接通過 \setupmaterial[indicator][reset=true] 來啓用重新計數

以上所有實例都具有以下鍵值: before after align style color 此外,\setupmaterial 可以通过 spacebefore 和spaceafter 來控制環境前後的垂直距离

notice , if you want change [start = number] after a chapter , you should use \resetcount[COUNTER_NAME] to reset current counter to the number of start you've setted. otherwise, you need put [start = number] before the chapter you want to reset the counter.

```
\setupmaterial[title][color=green]
\startmaterial[title={Knuth},author={Mos},source={Yelu}]
\input knuth
\stopmaterial
```

<div style="border:1px solid">

(一) Knuth

<div align="right">Mos</div>

　　Thus, I came to the conclusion that the designer of a new system must not only be the implementer and first large–scale user; the designer should also write the first user manual.

　　The separation of any of these four components would have hurt TeX significantly. If I had not participated fully in all these activities, literally hundreds of improvements would never have been made, because I would never have thought of them or perceived why they were important.

<div align="right">But a system cannot be successful if it is too strongly influenced by a single person. Once the initial design is complete and fairly robust, the real test begins as people with many different viewpoints undertake their own experiments.</div>

<div align="right">Yelu</div>

</div>

```
1043  \setupmaterial [\c!align=center,
1044         %\c!color=,
1045         %\c!style=,
1046         \c!spacebefore=1em,
1047         \c!spaceafter=1em,
1048         %\c!title=,
1049         %\c!author=,
1050         %\c!source=,
1051         \c!indicator=continue,
```

```
1052                indent={first,always,2em},]
1053  \setupmaterial [\c!number] [\c!before={(},\c!after={)},
1054                  \c!prefix=no,\c!start=0,
1055                  \c!style=\namedmaterialparameter\c!title\c!style,
1056                  \c!color=\namedmaterialparameter\c!title\c!color,
1057                  \c!numberconversion=cn,\c!way=\v!by\v!chapter]
1058  \setupmaterial [\c!title] [\c!style=\ss\tfa,\c!color=,\c!align=center,
1059                  \c!before=,]
1060  \setupmaterial [\c!author] [\c!style=\tf,\c!color=,\c!align=flushright]
1061  \setupmaterial [\c!source] [\c!before=\par,\c!align=flushright]
1062  \setupmaterial [indicator,indicator_helper]
1063        [style=\ss\bf,before={ (~},after={~) },prefix=no,
1064        numberconversion=cn,type=line,reset=false]

1065  \def\material_counter_parameter#1%
1066   {\begingroup
1067    \def\currentmaterial{#1}%
1068    \setupalign[\namedmaterialparameter\c!title\c!align]
1069    \usematerialstyleandcolor\c!style\c!color
1070    \namedmaterialparameter\currentmaterial\c!before
1071    \incrementcounter[#1]\convertedcounter[#1]%
1072    \namedmaterialparameter\currentmaterial\c!after
1073    \endgroup}

1074  \def\material_parameter#1%creat new element in material
1075   {{\begingroup
1076    \def\currentmaterial{#1}%
1077    \setupalign[\namedmaterialparameter\currentmaterial\c!align]
1078    \usematerialstyleandcolor\c!style\c!color
1079    \namedmaterialparameter\currentmaterial\c!before
1080    \rootmaterialparameter\currentmaterial
1081    \namedmaterialparameter\currentmaterial\c!after
1082    \par\endgroup}}

1083  \tolerant\protected\def\startmaterial[#1]{\begingroup%
1084    \lettonothing\currentmaterial%
1085    \edef\p_indicator{\rootmaterialparameter\c!indicator}
1086    \edef\p_reset{\namedmaterialparameter{indicator}\c!reset}
1087    \processaction[\p_indicator][
1088     reset=>\let\indicator_reset_helper\resetindicators,
1089    continue=>\continue_countertrue\let\indicator_reset_helper\relax,]
1090    \processaction[\p_reset][
1091     true=>\let\indicator_reset_helper\resetindicators,
1092     false=>\continue_countertrue\let\indicator_reset_helper\relax,]
1093    \env_materialtrue%
1094    \iffirstargument\setupcurrentmaterial[#1]\fi
1095    \indicator_reset_helper
1096    \usematerialstyleandcolor\c!style\c!color%
1097    \blank[\rootmaterialparameter\c!spacebefore]
1098    \startalignment[\rootmaterialparameter\c!align]
1099       \material_counter_parameter\c!number
1100       \material_parameter\c!title
```

```
1101        \material_parameter\c!author
1102     \stopalignment
1103     \blank[\rootmaterialparameter\c!spaceafter]
1104     \setupindenting[\rootmaterialparameter{indent}]
1105   }
1106   \def\stopmaterial{%
1107     \material_parameter\c!source
1108     \indicator_reset_helper
1109     \endgroup}

1110   \tolerant\protected\def\indicator[#1]#:#2{\begingroup%
1111     \def\currentmaterial{indicator}
1112     \iffirstargument\setupmaterial[indicator][#1]\fi%
1113     \edef\indicator_type{\namedmaterialparameter\currentmaterial\c!type}%
1114     \edef\indicator_reset{\namedmaterialparameter\currentmaterial\c!reset}%
1115     \processaction[\indicator_type]%
1116         [line=>\let\indicator_type\underbar,%
1117          none=>\let\indicator_type\relax]%
1118     \usematerialstyleandcolor\c!style\c!color%
1119     \indicator_type{%
1120     \namedmaterialparameter\currentmaterial\c!before%
1121     \ifmode_check%
1122      \ifenv_material\color[red]{material}\else\color[red]{\currentitemgroup}\fi%
1123      \ifcontinue_counter\color[red]{continue}\fi%
1124     \fi%
1125     \ifenv_material%
1126      \ifmode_check\color[red]{::indicator}\fi%
1127      \incrementcounter[\currentmaterial]%
1128      \convertedcounter[\currentmaterial]%
1129     \else%
1130      \ifmode_check\color[red]{::helper}\fi%
1131      \incrementcounter[indicator_helper]%
1132      \convertedcounter[indicator_helper]%
1133     \fi%
1134     \namedmaterialparameter\currentmaterial\c!after%
1135     #2}
1136   \endgroup}

1137   \def\indicators{\convertedcounter[indicator]%%% TODO 增強該命令的用法
1138          \incrementcounter[indicator]}
1139   \def\resetindicators{\setcounter[indicator][0]%
1140          \setcounter[indicator_helper] [0]}
```

Memoir Ever

第13部分 设置 close 环境

```
1141  \cnt_closetest=1\relax
1142  \tolerant\protected\def\closebar#1{
1143   \startbar[underbar]
1144    \scratchcounter\numexpr16/\plustwo\relax
1145    \interwordspacesbefore\scratchcounter
1146     \zwj\runninghbox{\resetbar{#1}}\zwj
1147    \interwordspacesafter\scratchcounter
1148   \stopbar}
```

close 環境近乎是單獨設計的。該環境主要使用兩個命令：\startclose 和 \stopclose 用來創建該環境，\closechoice 用來標記環境內的選項,該命令隨行文放置即可。選項無須再次在文章後放置, \stopclose 會自行放置。因為 close 環境的子項目 \closechoice 是通過 choice 環境設置的。因此,可以通過 [*] 來標記正確答案。

close 環境同樣繼承了 answer 的鍵值。此外設置了 reset 鍵來選擇是否每一篇重置選項的題號,其他的鍵值： barcolor barstyle 設置下划線樣式 before after style color 用於整體環境 width frame stopper distance 用於選項前題號樣式

```
\startclose
On Oct. 11, hundreds of runners competed in a cross-country race in Minnesota.
Melanie Bailey should have \closechoice[designed,followed,changed,finished] the
course earlier than she did. Her \closechoice[delay,chance,trouble,excuse] came
because she was carrying a \closechoice[judge,volunteer,classmate,competitor]
across the finish line.

As reported by a local newspaper, Bailey was more than two-thirds of the way
through her \closechoice[race,school,town,training] when a runner in front of
her began crying in pain. She \closechoice[agreed,returned,stopped,promised]
to help her fellow runner, Danielle Lenoue. Bailey took her arm to see if she
could walk forward with \closechoice[courage,aid,patience,advice] . She couldn't.
Bailey then \closechoice[went away,stood up,stepped aside,bent down] to let Lenoue
climb onto her back and carried her all the way to the finish line, then another
300 feet to where Lenoue could get \closechoice[medical,public,constant,equal] attention.

Once there, Lenoue was \closechoice[interrupted,assessed,identified,appreciated]
and later taken to a hospital, where she learned that she had serious injuries in
one of her knees. She would have struggled with extreme \closechoice[hunger,pain,cold,tiredness]
to make it to that aid checkpoint without Bailey's help.

As for Bailey, she is more \closechoice[worried,ashamed,confused,discouraged]
about why her act is considered a big \closechoice[game,problem,lesson,deal] .
"She was just crying. I couldn't \closechoice[leave,cure,bother,understand] her,"
Bailey told the reporter. "I feel like I was just doing the right thing."

Although the two young women were strangers before the \closechoice[ride,test,meet,show] ,
they've since become friends. Neither won the race, but the
\closechoice[secret,display,benefit,exchange]
of human kindness won the day.
\stopclose
```

On Oct. 11, hundreds of runners competed in a cross-country race in Minnesota. Melanie Bailey should have ____1____ the course earlier than she did. Her ____2____ came because she was carrying a ____3____ across the finish line.

As reported by a local newspaper, Bailey was more than two-thirds of the way through her ____4____ when a runner in front of her began crying in pain. She ____5____ to help her fellow runner, Danielle Lenoue. Bailey took her arm to see if she could walk forward with ____6____ . She couldn't. Bailey then ____7____ to let Lenoue climb onto her back and carried her all the way to the finish line, then another 300 feet to where Lenoue could get ____8____ attention.

Once there, Lenoue was ____9____ and later taken to a hospital, where she learned that she had serious injuries in one of her knees. She would have struggled with extreme ____10____ to make it to that aid checkpoint without Bailey's help.

As for Bailey, she is more ____11____ about why her act is considered a big ____12____ . "She was just crying. I couldn't ____13____ her," Bailey told the reporter. "I feel like I was just doing the right thing."

Although the two young women were strangers before the ____14____ , they've since become friends. Neither won the race, but the ____15____ of human kindness won the day.

1. A. designed   B. followed   C. changed   D. finished
2. A. delay   B. chance   C. trouble   D. excuse
3. A. judge   B. volunteer   C. classmate   D. competitor
4. A. race   B. school   C. town   D. training
5. A. agreed   B. returned   C. stopped   D. promised
6. A. courage   B. aid   C. patience   D. advice
7. A. went away   B. stood up   C. stepped aside D. bent down
8. A. medical   B. public   C. constant   D. equal
9. A. interrupted   B. assessed   C. identified   D. appreciated
10. A. hunger   B. pain   C. cold   D. tiredness
11. A. worried   B. ashamed   C. confused   D. discouraged
12. A. game   B. problem   C. lesson   D. deal
13. A. leave   B. cure   C. bother   D. understand
14. A. ride   B. test   C. meet   D. show
15. A. secret   B. display   C. benefit   D. exchange

```
1149  \setupclose[%showanswer=false,
1150      answer=\getanswerfromchoice,
1151      reset=true,
1152      %mp=.
1153      answerstyle=\ss,
1154      answercolor=red,
1155      width=2em,% set order width
1156      frame=off,% set order frame
1157      stopper=.,% set order stopper
1158      distance=.5em,% set order distance
1159      after=\blank[halfline]]

1160  \def\closechoice[#1]{%定義文章內的序號。這是用戶命令, 用來記錄選項(定義選項列表)
1161   \expandafter\gdef\csname close:\romannumerals\cnt_closetest\endcsname{#1}%
1162   % cnt_closetest 用於標記選項列表, 會隨著選項題目增加, 無論是否啓用重置, 該計數器都會記錄並自增
1163     % 在生成選項序列時, 該計數器可以進行: (1) 是否設置了選項 (2) 遞增出選項序列
1164     % 該計數器屬於局域, 每篇文章都會重置回 1。
1165   \ifclose_counter_reset%
1166    \begingroup%
```

```
1167        \switchtocolor[\closeparameter{barcolor}]%
1168        \closeparameter{barstyle}%
1169        \closebar{\number\cnt_closetest}%
1170      \endgroup%
1171    \else%
1172     \begingroup\let\par\relax% 將其封裝在局域, 避免 par 命令失效
1173       \switchtocolor[\closeparameter{barcolor}]%
1174      \closeparameter{barstyle}%
1175      \startitemgroup[env_question][n,continue,text,nostopper]%
1176                    [lefttext=\closebar,righttext=]%
1177          \item \setcounter [strc_close_counter][\currentitemnumber]%
1178              \savecounter[strc_close_counter]\relax%
1179      \stopitemgroup%
1180     \endgroup%
1181    \fi%
1182    \advance\cnt_closetest by 1\relax}

1183  \def\docloseitem#1{\startcitem #1\stopcitem}
1184  \def\close_order{%選項前的序號樣式, 序號通過 tempa 設定
1185    \noindent\unskip%
1186    \inframed[width=\closeparameter\c!width,
1187         frame=\closeparameter\c!frame,
1188         foreground=color,
1189         foregroundcolor=\closeparameter\c!color,
1190         foregroundstyle=\closeparameter\c!style]{%
1191     \convertnumber{n}{\number\cnt_closetest_tempa}%
1192     \closeparameter\c!stopper%
1193     \show_point_or_answer[close][answer]}%
1194    \hskip\closeparameter\c!distance\relax
1195    \global\advance\cnt_closetest_tempa by 1\relax
1196    \unskip}
1197  \def\placeclosechoice{%
1198    \ifnum\cnt_closetest=1\relax
1199      \color[red]{it seems that there is no
1200             "closechoice" be setted,
1201             please check it!}%
1202    \fi%
1203    \scratchcounter\numexpr\cnt_closetest-1\relax
1204    \cnt_closetest=1\relax%
1205    \def\closetest_list{\csname close:\romannumerals\cnt_closetest\endcsname}%
1206    \useclosestyleandcolor\c!style\c!color%
1207    \dorecurse{\number\scratchcounter}{%
1208     \hbox{\hsize=\textwidth%
1209        \parentitemnumber=\currentitemnumber\relax
1210       \edef\currentuserorder{\number\cnt_closetest_tempa%放置在這裡才能正確獲取題號
1211        \ifnum\rawcountervalue[Unicode_botlevel]=0\relax\else% 抽出 order 定義,
1212        (\rawcountervalue[Unicode_botlevel])\fi}% 因為該環境沒有上級 question 環境
1213      \hbox{\close_order}\hbox{%
1214      \vtop{%
1215       \startchoice%
1216        \processcommacommand[\closetest_list]\docloseitem%
```

```
1217        \stopchoice%
1218      }}}%
1219    \advance\cnt_closetest by 1\relax}%
1220    \cnt_closetest=1\relax%
1221    }

1222  \tolerant\protected\def\startclose[#1]{\begingroup%
1223    \env_closetrue%
1224    \iffirstargument\setupclose[#1]\fi%
1225    \edef\p_reset{\closeparameter\c!reset}
1226     \ifx\p_reset\c!true%
1227        \close_counter_resettrue%
1228    \else\close_counter_resetfalse\fi%
1229    \restorecounter[strc_close_counter]% 继承 question 的序号
1230    \scratchcounter\rawcountervalue[strc_close_counter]%
1231    \ifclose_counter_reset\cnt_closetest_tempa=1\relax\else%
1232     \cnt_closetest_tempa=\number\scratchcounter%tempa 标记文章内的序号和选项前的序号
1233     \cnt_closetest_tempa=\numexpr\cnt_closetest_tempa+1\relax
1234    \fi\closeparameter\c!before%
1235    }
1236  \def\stopclose{%
1237    \closeparameter\c!after%
1238    \placeclosechoice%
1239    \endgroup%
1240    }
```

第14部分　設置 optclose 環境

該環境是 close 環境的變體,但目前並未對該環境進行更多的設置。該環境的主要命令有兩個：\startoptclose 和 \stopoptclose 用來創建該環境,\ocitem 用來標記環境內的選項,該命令隨行文放置即可。
\ocitem[answer=blabla]blablabla

此外,還有一個特殊的命令,\specialocitem 僅具有 answer 鍵值。可以通過 \setupocitem 來調整該命令的樣式。該命令標記答案,且無須任何環境包裹。

```
1241  \setupocitem [%answer=,
1242        %color=,
1243        %point=,
1244        %showanswer=false,
1245        answerprelabel={answer: },]

1246  \def\startoptclose{
1247  \startitemgroup[env_question][n,continue,text,nostopper][lefttext=\closebar,righttext=]%
1248  \leftskip=0pt\relax
1249  \set_count_envlevel[env_question:1][question]%
1250  }

1251  \def\stopoptclose{
1252  \stopitemgroup}

1253  \setupocitem[answercolor=red,answerstyle=\ss,]

1254  \tolerant\def\ocitem[#1]#:#2%
1255    {\begingroup%
1256    \iffirstargument\setupocitem[#1]\fi%
1257    \useocitemstyleandcolor\c!style\c!color%
1258    \let\par\relax\increaseQuestionID%         %%%% 必須命令, 自增序號以備調用
1259    \item \show_point_or_answer[ocitem][point]%
1260        \set_count_itemlevel[env_question:2][ocitem]%%%% 必須命令, 設定序號
1261        % 注意, 此时 toplevel 并没有正确的关闭, 因此最终的结果依然是 toplevel。
1262        % 但是该环境本身就被视为 toplevel        => 5
1263        % 如果该环境被视为子项目时, 则需要关闭 toplevel。==> 5(1)
1264        % 另外, 关闭 toplevel 需要在 set_count_itemlevel 命令之前才会生效。
1265        \allowbreak\doifsomethingelse{#2}{(#2)}{}%
1266        \show_point_or_answer[ocitem][answer]%
1267        \dataset_collector[ocitem][ocitem]%      %%%% 必須命令, 設定可調用信息
1268        \setcounter    [strc_close_counter][\currentitemnumber]%
1269        \savecounter   [strc_close_counter]%
1270    \endgroup}

1271  \def\specialocitem[#1]{\begingroup\let\par\relax%
1272    \setupocitem[#1]\useocitemstyleandcolor\c!style\c!color%%
1273    \startitemgroup[env_question][n,continue,text,nostopper][lefttext=\closebar,righttext=]%
1274    \item \ifenv_close\relax\else%
1275        \increaseQuestionID%
1276        %\show_point_or_answer[ocitem][point]%
1277        \set_count_itemlevel[env_question:2][ocitem]%
1278        % 关于 toplevel 的问题参见 ocitem 的解释。
1279        % 是否需要设置子项目还有待考虑。
```

```
1280        \show_point_or_answer[ocitem][answer]%
1281        \dataset_collector[ocitem][ocitem]%
1282        \setcounter   [strc_close_counter][\currentitemnumber]%
1283        \savecounter  [strc_close_counter]\fi%
1284    \stopitemgroup\removeunwantedspaces\endgroup}
```

第15部分　score

放置在 answer 環境內標記得分。

```
score\score{3}\\
score\score[type=dotfill]{30}\\
\resetscore\\
score\score[type=cdotfill]{30}\\
\setupscore[score=calculation]
score\score[type=space]{3}\\
score\score[type=hfill]{3}\\
```

```
1285  \newcount\cnt_step_score
1286  \def\score_calc#1{% only show number
1287  \newcount\cnt_step_score_temp%
1288  \global\cnt_step_score_temp=#1\relax%
1289  \ifnum\cnt_step_score=0\global\cnt_step_score=#1\relax\else%
1290  \global\cnt_step_score=\numexpr\cnt_step_score+\cnt_step_score_temp\relax%
1291  \fi\number\cnt_step_score%
1292  }
1293  \def\dotfill{\leavevmode%
1294  \xleaders\hbox to 0.25em{\hfil.\hfil}%
1295  \hfill\kern 0pt\relax}
1296  \def\cdotfill{\leavevmode%
1297  \xleaders\hbox to 0.25em{\hfil$\cdot$\hfil}%
1298  \hfill\kern 0pt\relax}

1299  \installnamespace        {score}
1300  \installcommandhandler \????score {score} \????score
1301  \setupscore[style=\ssa,color=red,dotstyle=\ss,dotcolor=red,score=]

1302  \tolerant\protected\def\score[#1]#:#2{\begingroup% format style
1303  \iffirstargument\setupscore[#1]\fi%
1304  \scoreparameter\c!before%
1305  \usescorestyleandcolor\c!style\c!color%
1306  \start\space\scoreparameter{dotstyle}%
1307  \switchtocolor[\scoreparameter{dotcolor}]%
1308  \doif{\scoreparameter\c!type}{}{\dotfill}%
1309  \doif{\scoreparameter\c!type}{space}{}%
1310  \doif{\scoreparameter\c!type}{hfill}{\unskip\hfill}%
1311  \doif{\scoreparameter\c!type}{dotfill}{\dotfill}%
1312  \doif{\scoreparameter\c!type}{cdotfill}{\cdotfill}%
1313  \space\stop\scoreparameter\c!left%
1314  \doif{\scoreparameter{score}}{}      {#2}%
1315  \doif{\scoreparameter{score}}{default}  {#2}%
1316  \doif{\scoreparameter{score}}{calculation}{\score_calc{#2}}%
1317  \doif{\scoreparameter{score}}{complex}  {#2 : \score_calc{#2}}%
1318  \scoreparameter\c!right\scoreparameter\c!after%
1319  \par\endgroup}
1320  \def\resetscore{%
1321  \cnt_step_score_temp=0\relax%
1322  \cnt_step_score=0\relax%
```

```
1323    }
1324    \installnamespace     {writingbox}
1325    \installcommandhandler \????writingbox  {writingbox}  \????writingbox
1326    \setupwritingbox[row=10,column=18,width=2em,height=2em,midheight=1em]
1327    \newcount \tbl_row
1328    \newcount \tbl_col
1329    \def\makewritingbox{\dosingleempty\makewritingbox_indeed}
1330    \def\makewritingbox_indeed[#1]{\begingroup%
1331      \tbl_row=\writingboxparameter{row} % yoko
1332      \tbl_col=\writingboxparameter{column} % tate
1333      \setupTABLE[split=yes]
1334      \setupTABLE[column][width=\writingboxparameter{width}]
1335      \setupTABLE[row][odd][height=\writingboxparameter{midheight}]
1336      \setupTABLE[row][even][height=\writingboxparameter{height}]
1337      \bTABLE
1338        \bTR \bTD[nc=\number\tbl_col] {} \eTD \eTR
1339        \dorecurse{\number\tbl_row}{
1340        \bTR
1341          \dorecurse{\number\tbl_col}{\bTD {} \eTD}
1342        \eTR
1343        \bTR \bTD[nc=\number\tbl_col] {} \eTD \eTR}
1344      \eTABLE
1345    \endgroup}
```

第16部分　模拟例子

```
1346  \dorecurse{200}{
1347  \expandafter\getrandomnumber \csname n_\romannumeral\recurselevel\endcsname {1} {20}}

1348  \dorecurse{200}{
1349  \expandafter\getrandomnumber \csname nn_\romannumeral\recurselevel\endcsname {1} {20}}

1350  \def\longtesttxt[#1]{%%1. \longtesttxt[\romannumeral 1]
1351   \ifcase\csname n_#1\endcsname%
1352    就像按 S 来响应错误一样。\or%0
1353    这个例子不太完整，因为页码没有存储在有用的地方。\or%1
1354    TeX 处理数学显示后，它将以下项目添加到当前垂直列表中： 惩罚、胶水、实际显示、胶水和惩罚。\or%2
1355    然而，它显示了一种增加或减少计数器的方法，并设置数字中的数字或相当于数字的罗马数字中的字母。\or%3
1356    基本问题是 "对 TeXbook 的页面引用应该如何出现在参考页面的描述区域中？" 这个例子显示了三种可能性。\or%4
1357    正如 TeX 不会随机连字符单词一样，它也不会在段落中的行之间随机打断数学表达式。\or%5
1358    TeX 仅考虑在关系（例如 = 或 < ）或二进制操作（例如 + 或 × ）之后进行中断。\or%6
1359    此命令提供对当前字体中所有字符的访问。号码应该在 0 -- 255 范围内。\or%7
1360    Junkjunk.tex文件不包含任何有用的东西，但这些行说明了一种读取辅助文件的方法。\or%8
1361    此命令将框寄存器中的列表副本添加到当前列表中。\or%9
1362    请注意，每个寄存器在创建后都会被初始化。\or%0
1363    此命令提供了一种直接指定分隔符的方法。\or%1
1364    数字应该是七个十六进制数字。\or%2
1365    它的前导数字必须在 0-7 范围内。该数字用作类号，其余六位数字用作 \type{\delcode} 值。\or%3
1366    Plain TeX 有二十多个定义，类似于： `\type{\def\rceil{\delimiter"5265307 }}'。\or%4
1367    这个定义意味着 \type{\rceil} 在家庭5（关闭），其小形式在家庭2位置"65，其大形式在家庭3位置"07"。\or%5
1368    \type{\Delimiter} 指定了一个数学符号，并以两种方式工作。\or%6
1369    当 TeX 寻找分隔符时（例如，在 \type{\left} 之后），它忽略了类数字，并使用剩余的六位数字作为 \type{
1370     \delcode}。\or%7
1371    但是，当分隔符在其他上下文中出现时，右三位数字被删除，其余四位数字成为符号的 \type{\mathcode}。\or%8
1372    对于 \type{\rceil}，这意味着 \type{\delcode} 是"265307，\type{\mathcode} 是"5265"。\or%9
1373    它首先计算子公式在轴上方和下延伸的距离。接下来，它使 y 等于刚刚计算的最大距离的两倍。\fi}

1374  \def\shorttesttxt[#1]{%%1. \shorttesttxt[i]
1375   \ifcase\csname nn_#1\endcsname%
1376    悬挂压痕的数量\or%0
1377    段落中正线的宽度\or%1
1378    开始一个没有缩进的新段落\or%2
1379    告诉TeX尝试增加或减少段落中的行数\or%3
1380    扩展令牌，但在到达非空间令牌之前什么都不做\or%4
1381    只有当主垂直列表为空时，它才会结束当前工作\or%5
1382    该命令在内部垂直模式下是不允许的\or%6
1383    任意中断由三个字符序列组成\or%7
1384    另一个无效号码被传递了\or%8
1385    来自假部分的条件命令\or%9
1386    线路需要转移的金额\or%0
1387    用于指定显示样式\or%1
1388    关系后断线的惩罚\or%2
1389    此命令定义了宏\or%3
1390    家庭的脚本字体\or%4
1391    尺寸没有变化\or%5
```

```
1392    额外的空间\or%6
1393    左边的段落\or%7
1394    当前线宽\or%8
1395    文本样式\or%9
1396    序列\fi}

1397    \def\choicenum[#1][#2][#3]{
1398      \ifnum\csname nn_#1\endcsname < 6
1399        \expandafter\startcitem[*]{\shorttesttxt[\romannumeral #2]} \stopcitem
1400      \else
1401        \expandafter\startcitem{\shorttesttxt[\romannumeral #3]} \stopcitem
1402      \fi
1403    }

1404    \newcount\LNUM\LNUM=1\relax
1405    \newcount\CNUM\CNUM=1\relax
1406    \newcount\DNUM\DNUM=1\relax
1407    \newcount\ENUM\ENUM=2\relax

1408    \def\example@choice#1{
1409      \setupquestion[point=2]
1410      \dorecurse{#1}{
1411       \startquestion
1412       \longtesttxt[\romannumeral\LNUM]\global\advance\LNUM by 1\relax
1413          \startchoice
1414          \choicenum[\romannumeral\CNUM][\the\DNUM][\the\ENUM]
1415          \global\advance\CNUM by 1\relax\global\advance\DNUM by 2\relax\global\advance\ENUM by 2\relax
1416          \choicenum[\romannumeral\CNUM][\the\DNUM][\the\ENUM]
1417          \advance\CNUM by 1\relax\advance\DNUM by 1\relax\advance\ENUM by 2\relax
1418          \choicenum[\romannumeral\CNUM][\the\DNUM][\the\ENUM]
1419          \advance\CNUM by 1\relax\advance\DNUM by 1\relax\advance\ENUM by 2\relax
1420          \choicenum[\romannumeral\CNUM][\the\DNUM][\the\ENUM]
1421          \advance\CNUM by 1\relax\advance\DNUM by 1\relax\advance\ENUM by 2\relax
1422          \stopchoice
1423          \startanswer
1424          \input knuthmath
1425          \stopanswer
1426      \stopquestion}
1427    }
1428    \def\example@fillin#1{
1429      \setupquestion[point=\getpointfrompitem]
1430      \setuppitem  [point=3]
1431      \startquestion
1432       \longtesttxt[\romannumeral\LNUM]
1433       \def\fillinanswer{\shorttesttxt[\romannumeral\CNUM]}
1434      \startproblem
1435      \dorecurse{#1}{
1436       \startpitem
1437         \ifmode_showanswer DDD \else XXXX\fi
1438         \longtesttxt[\romannumeral\CNUM]\fillin[]{\fillinanswer}
1439      \stoppitem
1440       \startanswer
```

```
1441          \input knuthmath
1442          \stopanswer
1443       \global\advance\CNUM by 1\relax}
1444       \stopproblem
1445       \stopquestion
1446    }
1447    \def\example@pitem#1{
1448       \setupquestion[point=\getpointfrompitem]
1449       \startquestion
1450       \longtesttxt[\romannumeral\LNUM]
1451       \def\fillinanswer{\shorttesttxt[\romannumeral\CNUM]}
1452       \startproblem
1453       \dorecurse{#1}{
1454       \startpitem[answer={answer : \recurselevel},point={\number\CNUM\relax}]
1455       \longtesttxt[\romannumeral\CNUM]\stoppitem
1456       \startanswer
1457          \input knuthmath
1458       \stopanswer
1459       \global\advance\CNUM by 1\relax}
1460       \stopproblem
1461       \stopquestion
1462    }
1463    \def\example@material#1{
1464       \startmaterial
1465       \input knuthmath
1466       \stopmaterial
1467       \setupquestion[point=6]
1468       \dorecurse{#1}{
1469       \startquestion
1470       \longtesttxt[\romannumeral\LNUM]\global\advance\LNUM by 1\relax
1471          \startchoice
1472          \choicenum[\romannumeral\CNUM][\the\DNUM][\the\ENUM]
1473          \global\advance\CNUM by 1\relax%
1474          \global\advance\DNUM by 2\relax%
1475          \global\advance\ENUM by 2\relax%
1476          \choicenum[\romannumeral\CNUM][\the\DNUM][\the\ENUM]
1477          \advance\CNUM by 1\relax%
1478          \advance\DNUM by 1\relax%
1479          \advance\ENUM by 2\relax%
1480          \choicenum[\romannumeral\CNUM][\the\DNUM][\the\ENUM]
1481          \advance\CNUM by 1\relax%
1482          \advance\DNUM by 1\relax%
1483          \advance\ENUM by 2\relax%
1484          \choicenum[\romannumeral\CNUM][\the\DNUM][\the\ENUM]
1485          \advance\CNUM by 1\relax%
1486          \advance\DNUM by 1\relax%
1487          \advance\ENUM by 2\relax%
1488          \stopchoice
1489          \startanswer
1490          \input knuthmath
1491          \stopanswer
```

```
1492        \stopquestion}
1493    }
1494    \def\example@close#1{
1495        \startclose
1496        \def\closechoicex{\shorttesttxt[\romannumeral\DNUM]\global\advance\DNUM by 1\relax}
1497        \dorecurse{#1}{
1498            \dorecurse{3}{
1499                \longtesttxt[\romannumeral\CNUM]
1500            \global\advance\CNUM by 1\relax
1501            }\closechoice[\closechoicex,{[*]\closechoicex},\closechoicex]
1502        \longtesttxt[\romannumeral\CNUM]}
1503    \stopclose
1504    }

1505    \def\example@optclose#1{
1506        \startoptclose
1507        \def\closechoicex{{\ss\shorttesttxt[\romannumeral\DNUM]\global\advance\DNUM by 1\relax}}
1508        \dorecurse{#1}{
1509            \dorecurse{3}{
1510                \longtesttxt[\romannumeral\CNUM]
1511            \global\advance\CNUM by 1\relax
1512            }\ocitem[answer={\shorttesttxt[\romannumeral\DNUM]}]{\closechoicex,\closechoicex,\closechoicex}
1513        \longtesttxt[\romannumeral\CNUM]}
1514    \stopoptclose
1515    }

1516    \def\example@specialoptclose#1{
1517        \startoptclose
1518        \def\closechoicex{\shorttesttxt[\romannumeral\DNUM]\global\advance\DNUM by 1\relax}
1519        \dorecurse{#1}{
1520            \dorecurse{3}{
1521                \longtesttxt[\romannumeral\CNUM]
1522            \global\advance\CNUM by 1\relax
1523            }\specialocitem[answer={\closechoicex}]
1524        \longtesttxt[\romannumeral\CNUM]}
1525    \stopoptclose
1526    }

1527    \newcount\qid_in_chap\qid_in_chap=1\relax
1528    \def\resetanswerid{\qid_in_chap=1\relax}
1529    \def\typeanswerbychap{\dosingleempty\typeanswerbychap_indeed}
1530    \def\typeanswerbychap_indeed[#1]#2{% #1 = chapter number, 該命令會自行遞增計數器來獲取答案
1531        \iffirstargument\qid_in_chap=#1\relax\fi%
1532        \datasetvariable{Answer_collector}{#2-\the\qid_in_chap}{answer}%
1533        \advance\qid_in_chap by 1\relax}
1534    \def\typeanswerdirect#1{% #1 = qid, 需要自行輸入來獲取某個題目的答案
1535        \datasetvariable{Answer_collector}{#1}{answer}}
1536    \def\typeanswerlist{\dodoubleempty\typeanswerlist_indeed}
1537    \def\typeanswerlist_indeed[#1][#2]#3{%#1 = chapter number
1538        \ifsecondargument\qid_in_chap=#2\fi% #2 = from which question to start
1539        \dorecurse{#3}{% answer amount
1540            \datasetvariable{Answer_collector}{#1-\the\qid_in_chap}{answer}%
```

```
1541      \advance\qid_in_chap by 1\relax}
1542    }

1543    \newcount\answer@seq@tempa\answer@seq@tempa=0\relax%
1544    \newcount\answer@seq@tempb\answer@seq@tempb=0\relax%
1545    \newcount\answer@seq@tempc
1546    \def\type@answer@i[#1*#2,#3,#4]{% #1 for row #2 for column %
1547                    % #3 chapter number #4 last answer id%
1548     \answer@seq@tempc=\numexpr#4-1\relax%
1549      \bTABLE
1550       \dorecurse{#1}{\bTR
1551        \dorecurse{#2}{%
1552        \ifnum\answer@seq@tempa>\answer@seq@tempc \bTD\eTD\relax\else%
1553           \advance\answer@seq@tempa by 1\relax%
1554            \expanded{\bTD
1555             \datasetvariable{Answer_collector}{#3-\the\answer@seq@tempa}{userorder}
1556        \eTD}\fi}
1557       \eTR\bTR
1558        \dorecurse{#2}{%
1559         \ifnum\answer@seq@tempb>\answer@seq@tempc \bTD\eTD\relax\else%
1560        \advance\answer@seq@tempb by 1\relax%
1561          \expanded{\bTD
1562          \datasetvariable{Answer_collector}{#3-\the\answer@seq@tempb}{answer}
1563        \eTD}\fi}
1564       \eTR}
1565      \eTABLE
1566    }

1567    \def\type@answer@ii{
1568    \answer_seq=0\relax
1569    \bTABLE
1570    \dorecurse{4}{\bTR
1571     \dorecurse{5}{
1572        \advance\answer_seq by 1\relax%
1573         \expanded{\bTD\the\answer_seq\eTD}
1574       \expanded{\bTD
1575        \datasetvariable{Answer_collector}{\the\answer_seq}{answer}
1576      \eTD}}
1577    \eTR}
1578    \eTABLE}
```

Memoir Ever

第17部分　模式设置

```
1579  \definemode[teacher][keep]
1580  \definemode[student][keep]
1581  \definemode[check] [keep]
1582  \doif{\moduleparameter{basicexam}{mode}}{teacher}
1583     {\enablemode[teacher]}{}
1584  \doif{\moduleparameter{basicexam}{mode}}{student}
1585     {\enablemode[student]}{}
1586  \doif{\moduleparameter{basicexam}{mode}}{}
1587     {\enablemode[student]}{}
1588  \startmode[teacher]
1589   \mode_showanswertrue
1590   \mode_showpointtrue
1591  \stopmode
1592  \startmode[student]
1593   \mode_showanswerfalse
1594   \mode_showpointfalse
1595  \stopmode
1596  \protect
1597  \stopmodule
1598  \endinput
```