Typesetting lecture notes with `multinotes.sty`

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Contents

The `answer` environment

- `blankanswers` replaces the content by blank space.

- `noanswers` removes the answer completely.

Here is an answer environment (might be removed).

> Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetuer id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

This is produced by the following code.

```
\begin{answer}
...
\end{answer}
```

Here is an answer environment with a custom title (might be removed)

> *Answer*   Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetuer id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

This is produced by the following code.

```
\renewcommand{\answername}{\sl Answer}
\begin{answer}
...
\end{answer}
```

1   Questions, choices and checkboxes

The package replicates the list environments found in `exam.cls`, namely `questions`, `parts`, `subparts`, `choices` and `checkboxes` and makes them responsive to `blankanswers` and `noanswers`. For example,

```
\begin{exercise}\label{exe:demo}
\begin{questions}
\question What is $7\times 8$? \ans{54}
\question State Pythagoras' theorem. \ans{$a^2+b^2=c^2$}
\end{questions}
\end{exercise}
```

Here is a list of questions inside a (theorem-like) exercise environment.

1.

1. *First question.*

   (a) *First part* | *Answer to first part.*

   (b) *Second part*

      (i) *First subpart.* | *Answer to first subpart.*

      (ii) *Second subpart.* | *Answer to second subpart.*

   (c) *Third part* | *Answer to third part.*

2. *Second question* | *Answer to second question.*

1.1 Multiple choice questions

In what year did Columbus first cross the Atlantic?

○ 1490

○ 1491

⊘ **1492**

○ 1493

This is produced by the following code.

```
In what year did Columbus first cross the Atlantic?
\begin{choices}
\choice 1490
\choice 1491
\correctchoice    1492
\choice 1493
\end{choices}
```

1.2 Multiple answer questions

Which of the following were members of the Beatles?

☑ **John**

☑ **Paul**

☑ **George**

☐ Zippy

This is produced by the following code.

```
Which of the following were members of the Beatles?
\begin{checkboxes}
\correctchoice John
\correctchoice Paul
\correctchoice George
\choice Zippy
\end{checkboxes}
```

1. *Here is a (theorem-like) quiz with a fill-the-blanks question, a true-or-false question, a multiple choice question, and a multiple answer question.*

```
Roses are \fillbox{red}, violets are \fillbox{blue}.
```

1. *Fill in the blanks: Roses are* red *, violets are* blue *.*

2. *The rain in Spain falls mainly on the plain.*

☑ *True*

○ *False*

3. *In what year did Columbus first cross the Atlantic?*

   ○ *1490*

   ○ *1491*

   ☑ *1492*

   ○ *1493*

4. *Which of the following were members of the Beatles?*

   ☑ **John**

   ☑ **Paul**

   ☑ **George**

   ☐ **Bingo**

2 Prime numbers quiz

1. What are the prime factors of 42?

   ○ 3×14

   ☑ $2 \times 3 \times 7$

   ○ 2×21

2. What are the prime factors of 150?

   ☑ $2 \times 3 \times 5 \times 5$

   ○ $3 \times 3 \times 5 \times 5$

   ○ 6×25

3. What is the LCM of 13 and 3?

   ○ 13

   ○ 3

   ☑ 39

4. What is the HCF of 32 and 24?

   ○ 2

   ☑ 8

   ○ 4

5. What is the LCM of 24 and 36?

   ○ 12

   ☑ 72

○ 30

6. What is the HCF of 104 and 136?

    ☑ 8

    ○ 12

    ○ 13

7. What is the HCF of 3×13 and $2^2 \times 13$?

    ○ 9

    ○ 17

    ☑ 13

8. What is the LCM of $2^2 \times 3^2 \times 5$ and $2^3 \times 3 \times 5$?

   ✓ 360

   ○ 16 120

   ○ 30

9. What is the HCF of $2 \times 5 \times 13$ and 22×13?

   ○ 13

   ✓ 26

   ○ 52

10. Find the LCM of $3^2 \times 11 \times 13$ and 3×11^2.

    ○ 1287

    ✓ 14 157

    ○ 429