

AcroTeX.Net

**The exerquiz package  
The userbmintrv1 option**

D. P. Story

## 1. Introduction

This article is motivated by an AcroT<sub>E</sub>X user (Thor G). He wants to ask his students to make a series of calculations, the result of which is to be entered into a `\RespBoxMath` input box. He is willing to accept the response as correct if the response falls into a designated interval  $[a, b]$ .

To implement this idea, a *convenience* command `\rbmIntrv` is defined as,

```
\newcommand{\rbmIntrv}[1]{\c@lCEPInfo#1\RespBoxMath}
```

The required argument of `\rbmIntrv` is an interval of numbers and is passed to `\c@lCEPInfo`, which computes `\intrCAns` and `\intrPrec`:

`\intrCAns`: The midpoint of the interval input and is a representative answer to the question.

`\intrPrec`: The half-width of the interval and plays the role of the required precision.

Following `\c@lCEPInfo`, `\RespBoxMath` is expanded; thus, the normal arguments of `\RespBoxMath` follow the declaration of the interval. For example, enter a number between 6.4 and 6.9, inclusive:

```
\rbmIntrvl{[6.4,6.9]}\intrCAns{1}\intrPrec{[0,1]}
```

In this simple example, observe the positioning of the `\intrCAns` and `\intrPrec` commands, as computed by `\c@lCEPInfo`. Note that the input numbers of the arguments of `\rbmIntrvl` and `\RespBoxMath` *always* use *English number notation*.

These definitions are made when the `userbmintrvl` option of `exerquiz` (dated 2021/04/24 or later) is taken.

## 2. Sample quizzes

Two quizzes are presented here, the first uses standard English number notation (1.23) and the second on uses German number notation (1,23). The quizzes are found on the next two pages.

(English notation) Answer each of the following, passing is 100%.

1. Enter a number in the interval  $[6.40, 6.90]$  that has *exactly* two decimal places and written in English number notation. A decimal point (.) is required.
2. Enter a number in the interval  $[6.40, 6.90]$ , that has *at most* two decimal places and written in English number notation. An integer is an acceptable response (though incorrect in this case).

Ans:

(German notation) Answer each of the following, passing is 100%.

1. Enter a number in the interval  $[6,40;6,90]$  that has *exactly* two decimal places and written in German number notation. A decimal point (,) is required.
2. Enter a number in the interval  $[6,40;6,90]$  that has *at most* two decimal places and written in German number notation. An integer is an acceptable response (though incorrect in this case).

Ans: