

## Auto Multiple Choice - Bug # 818: AMCNumericChoice rounding problem

<b>Status:</b>	Closed	<b>Priority:</b>	Normal
<b>Author:</b>	Yves Combe	<b>Category:</b>	
<b>Created:</b>	04/12/2022	<b>Assignee:</b>	
<b>Updated:</b>	04/12/2022	<b>Due date:</b>	
<b>Description:</b>	answer as 9/4 with decimal=1 or 1/2 with decimal=0 in AMCNumericChoice give bad result.		

### History

#### 04/12/2022 08:45 am - Yves Combe

This bug, probably, comes from the xfp package.

xfp gives the same rounding errors, where fp does not.

#### 04/12/2022 08:50 am - Yves Combe

Sorry, i forgot: version 1.5.0-rc2 running on MX Linux (Debian 11 based).

#### 04/12/2022 09:02 am - Alexis Bienvenüe

- Status changed from New to Feedback

- File 12r.png added

- File 94r.png added

Seems OK for me, with development version:

!12r.png! !94r.png!

#### 04/12/2022 09:18 am - Yves Combe

- File fp-xfp.png added

As you maybe should know, 0.5 and 2.25 should be rounded as 1 and 2.3, respectively.

!fp-xfp.png!

#### 04/12/2022 09:37 am - Yves Combe

- File round-to-even.png added

Got it. It rounds half to even.

[[[https://en.wikipedia.org/wiki/Rounding#Round\\_half\\_to\\_even](https://en.wikipedia.org/wiki/Rounding#Round_half_to_even)]]

!round-to-even.png!

**04/12/2022 09:41 am - Alexis Bienvenüe**

- Status changed from *Feedback* to *Closed*

- % Done changed from 0 to 100

Exactly. Here the round half to even from @l3fp@ is used — this is the same for e.g. @python@ and @R@.

If you need another choice, round your result before passing it to @\AMCNumericChoice@.

**04/12/2022 09:58 am - Yves Combe**

You should add an option to round with +inf rule. xfp support it:

```
\fpeval{round(9/4,1,+inf)}
```

## Files

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source.tex	2.2 kB	04/12/2022	Yves Combe
12r.png	10.6 kB	04/12/2022	Alexis Bienvenüe
94r.png	10.6 kB	04/12/2022	Alexis Bienvenüe
fp-xfp.png	11.9 kB	04/12/2022	Yves Combe
round-to-even.png	41.4 kB	04/12/2022	Yves Combe