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

Status:	Closed	Priority:	Normal		
Author:	Yves Combe	Category:			
Created:	04/12/2022	Assignee:			
Updated:	04/12/2022	Due date:			
Description:	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]]

!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			
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