

CoCoA-5 - Support #1368

Improve manual for mod

24 Nov 2019 12:58 - John Abbott

Status:	Closed	Start date:	24 Nov 2019
Priority:	Normal	Due date:	
Assignee:	John Abbott	% Done:	100%
Category:	Manual/documentation	Estimated time:	0.77 hour
Target version:	CoCoA-5.3.0	Spent time:	0.75 hour
Description			
The manual entry for mod needs to be improved.			
Ange recently reported that mod(a,p) = mod(b,p) did not work as she expected; the main point being that a and b has opposite signs.			
Make the manual clearer.			
Related issues:			
Related to CoCoALib - Design #1182: "mod" for BigInt		Closed	04 May 2018

History

#1 - 24 Nov 2019 13:04 - John Abbott

- Status changed from New to In Progress

- % Done changed from 0 to 10

Currently the manual and the implementation are incompatible. The manual says that the remainder is always non-negative, but this is not true:

```
/**/ mod(-1, 7);  
-1
```

A very similar issue arose about a year ago in CoCoALib; it seems the CoCoA-5 manual was not checked/updated. We should do this.

#2 - 24 Nov 2019 13:04 - John Abbott

- Related to Design #1182: "mod" for BigInt added

#3 - 24 Nov 2019 13:11 - John Abbott

- Status changed from In Progress to Resolved

- Assignee set to John Abbott

- % Done changed from 10 to 50

The solution to Ange's problem is to compute $\text{mod}(a-b,p)$; this will be zero iff a and b are congruent modulo p. Perhaps I should add this to the manual...??

#4 - 09 Jan 2020 11:43 - John Abbott

- *Status changed from Resolved to Feedback*
- *% Done changed from 50 to 90*
- *Estimated time set to 0.77 h*

I have updated the manual entry; I think it is clear now.

#5 - 13 Feb 2020 15:44 - John Abbott

- *Status changed from Feedback to Closed*
- *% Done changed from 90 to 100*