CoCoA-5 - Feature #1410

IsDivisible also for INT

03 Feb 2020 13:40 - John Abbott

Status:	Closed	**Start date:**	03 Feb 2020
Priority:	High	**Due date:**	
Assignee:	Anna Maria Bigatti	**% Done:**	100%
Category:	enhancing/improving	**Estimated time:**	2.01 hours
Target version:	CoCoA-5.3.0	**Spent time:**	1.95 hour

Description

In CoCoALib IsDivisible works for various types of value, including integers.
In CoCoA-5, it expects just a RINGELEM.

Extend it to work with INT too?

History

#1 - 03 Feb 2020 13:42 - John Abbott

- Status changed from New to In Progress

- % Done changed from 0 to 10

I have been caught out by this myself on several occasions. I know one can use mod instead, but it is more expressive if one can write IsDivisible(a,b).

Florian asked me about it today (over lunch).

It should be easy to implement; should we? Shall we?

#2 - 03 Feb 2020 15:48 - Anna Maria Bigatti

John Abbott wrote:

> I have been caught out by this myself on several occasions. I know one can use mod instead, but it is more expressive if one can write IsDivisible(a,b).

I agree.
So, it is just to add all the compbination of types (somehow) for cocoa-5?

#3 - 03 Feb 2020 16:03 - John Abbott

- % Done changed from 10 to 20

Yes. I think there are probably just two (main) cases:

- RINGELEM and RINGELEM
- INT and INT

- not so sure about INT and RINGELEM (or RINGELEM and INT)

#4 - 13 Feb 2020 10:19 - Anna Maria Bigatti

- Assignee set to Anna Maria Bigatti

done

```
/**/ use QQ[x];
/**/ IsDivisible(9,3);
true
/**/ IsDivisible(9,2);
false
/**/ IsDivisible(9*x,2);  -- 9*x is in QQ[x], so divisible by any constant!!
true
/**/ use ZZ[x];
/**/ IsDivisible(9*x,2);
false
```

#5 - 13 Feb 2020 15:40 - Anna Maria Bigatti

- Status changed from In Progress to Closed

- % Done changed from 20 to 100

- Estimated time set to 2.01 h

manual done