CoCoALib - Design #432

Semantics of IsPrintedWithMinus

31 Jan 2014 20:29 - John Abbott

Status:	In Progress	Start date:	31 Jan 2014	
Priority:	Normal	Due date:		
Assignee:		% Done:	10%	
Category:	Various	Estimated time:	0.00 hour	
Target version:	CoCoALib-1.0	Spent time:	0.75 hour	
Description				
We should clarify what the semantics of IsPrintedWithMinus are.				
I suggest that if IsPrintedWithMinus(x) gives true then IsPrintedWithMinus(-x) must give false; note that x and -x could both give false <i>e.g.</i> if using least non neg residue for a prime finite field.				
Related issues:				
Related to CoCoALib - Feature #222: Printing polynomials - spaces between terms			In Progress	08 Aug 2012
Related to CoCoALib - Feature #1117: Better printing of negative coeffs			In Progress	07 Nov 2017
Related to CoCoALib - Design #1156: Printing for RingElem			New	12 Feb 2018

History

#1 - 03 Feb 2014 12:49 - John Abbott

- Status changed from New to In Progress

If we follow the suggestion in note 6 of issue <u>#222</u> then we need to define IsPrintedWithMinus only for numerical ringelems (*i.e.* ones for which IsRational gives true). If so, then there is an easy definition:

```
bool IsPrintedWithMinus(ConstRefRingElem x)
{
  BigRat q;
  return IsRational(q, x) && sign(q) == -1;
}
```

#2 - 03 Feb 2014 15:27 - John Abbott

Anna rightly asked how should TwinFloats be handled.

Right now, I'm undecided. I'm quite sure that any polynomial with twinfloat coeffs will be very ugly/unreadable when printed.

#3 - 14 Jul 2014 18:13 - John Abbott

- Target version set to CoCoALib-1.0
- % Done changed from 0 to 10

If we use the definition I gave in comment 1 then some twin-float numbers will be recognized as rationals and should be printed out as such (I suppose). It could look a bit odd having a poly whose coeffs are partly rational and partly "floating-point"; then again a rational coeff is probably important information (since I'd expect it to be a rare event).

#4 - 07 Nov 2017 12:34 - John Abbott

- Related to Feature #1117: Better printing of negative coeffs added

#5 - 12 Feb 2018 12:33 - John Abbott

- Related to Design #1156: Printing for RingElem added