

## CoCoALib - Feature #4

### Squarefree GCD-free basis

19 Oct 2011 12:38 - John Abbott

<b>Status:</b>	Rejected	<b>Start date:</b>	19 Oct 2011
<b>Priority:</b>	Normal	<b>Due date:</b>	
<b>Assignee:</b>	John Abbott	<b>% Done:</b>	100%
<b>Category:</b>	New Function	<b>Estimated time:</b>	0.88 hour
<b>Target version:</b>	CoCoALib-0.99700	<b>Spent time:</b>	0.85 hour
<b>Description</b>			
From a non-empty collection of polynomials compute a square-free gcd-free basis.			
<b>Related issues:</b>			
Related to CoCoALib - Feature #259: Squarefree(?) GCD-free basis		<b>Closed</b>	<b>09 Oct 2012</b>

### History

#### #1 - 18 Dec 2013 14:35 - John Abbott

Something to do over the Xmas holidays?

I thought I'd already implemented this but cannot find it anywhere (unless I gave it a strange name).

#### #2 - 01 Aug 2014 08:59 - Anna Maria Bigatti

- Target version set to CoCoALib-1.0

#### #3 - 25 Jun 2018 15:28 - John Abbott

- Category set to New Function

- Status changed from New to In Progress

- Assignee set to John Abbott

- % Done changed from 0 to 20

Is this not subsumed by issue [#259](#)?

The only remaining question is the "squarefree" part. We could just make the inputs squarefree and then call the general function; this won't be "optimal" in all cases, but perhaps should not be too bad...

#### #4 - 25 Jun 2018 15:28 - John Abbott

- Target version changed from CoCoALib-1.0 to CoCoALib-0.99600

#### #5 - 03 Aug 2018 17:11 - John Abbott

- Target version changed from CoCoALib-0.99600 to CoCoALib-0.99650 November 2019

#### #6 - 08 Feb 2019 21:17 - John Abbott

The "squarefree" version should only be for polynomials because it is too costly (in general) to tell if an integer is squarefree.

#### #7 - 26 Feb 2019 17:07 - John Abbott

- Target version changed from CoCoALib-0.99650 November 2019 to CoCoALib-1.0

I'm postponing this issue because we already have "coprime factor basis", and it is not yet clear to me whether we need also a "squarefree coprime factor basis".

**#8 - 27 Jan 2020 17:58 - John Abbott**

- *Status changed from In Progress to Rejected*
- *Target version changed from CoCoALib-1.0 to CoCoALib-0.99700*
- *% Done changed from 20 to 100*
- *Estimated time set to 0.88 h*

I am rejecting this issue.

The "squarefree" part is too risky/costly for large integer args.

It could be done for polynomials, but then it is probably better simply to call a squarefree factorizer (before or after).

Maybe a new issue can be made if we really need a sqfr coprime factor basis in the future.

Rejecting.