CoCoALib - Slug #1757

gcd(f,f) is slow

23 Jul 2023 18:03 - John Abbott

Status:	New		Start date:	23 Jul 2023
Priority:	Normal		Due date:	
Assignee:			% Done:	0%
Category:	Improving		Estimated time:	0.00 hour
Target version:	CoCoALib-0.99880		Spent time:	0.65 hour
Description				
Consider making a special case of gcd(f,f) or indeed gcd(f,k*f) where k is a scalar.				

History

#1 - 23 Jul 2023 18:04 - John Abbott

Here is just 1 example illustrating the point:

```
/**/ f := cyclotomic(20,x)*cyclotomic(257*307,x);
/**/ t0:=CpuTime(); h := gcd(f,f); TimeFrom(t0);
3.009
```

#2 - 03 Oct 2023 19:14 - John Abbott

I have just tried computing RootBound(f). It is taking ages :-([about 360s]
No doubt the problem is that it takes a long time to compute the graeffe transform.
Moreover it is doing 5 graeffe transforms -- why???

#3 - 16 Feb 2024 09:57 - John Abbott

- Target version changed from CoCoALib-0.99850 to CoCoALib-0.99880