CoCoA-5 - Bug #1577

radical: lex order, ERROR: Ring is not standard graded

15 Feb 2021 22:48 - John Abbott

Status:	Closed		Start date:	15 Feb 2021
Priority:	Normal		Due date:	
Assignee:	Anna Maria Bigatti		% Done:	100%
Category:	bug		Estimated time:	0.00 hour
Target version:	CoCoA-5.4.0		Spent time:	0.80 hour

Description

This should not happen:

```
use QQ[x,y],lex;
I := ideal(x*y +x,  x^2 +x);
radi := radical(I); --> triggers error
ERROR: Ring is not standard graded
```

The error was triggered by a call to **DimQuot**

I thought this had already been reported, but cannot find the issue.

Related issues:

Related to CoCoALib - Bug #1779: Radical error with lex (again)	**Closed**	**05 Feb 2024**
Related to CoCoALib - Feature #1780: radical for ideals in SparsePolyRing: c...	**Closed**	**06 Feb 2024**

History

#1 - 15 Feb 2021 22:49 - John Abbott

The full error mesg is:

```
--> ERROR: Ring is not standard graded
--> [CoCoALib] dim
--> WHERE: at line 863 (column 8) of radical.cpkg5
-->   D := DimQuot(LT(I));
-->        ^^^^^^^^^^^^^
```

#2 - 19 Feb 2021 17:26 - John Abbott

- Status changed from New to Resolved

- Assignee set to Anna Maria Bigatti

- % Done changed from 0 to 70

Anna has implemented the obvious workaround: map into a new poly ring (with degrevlex), and then unmap the result.
Seems to work OK.

#3 - 19 Mar 2021 12:39 - Anna Maria Bigatti

- Status changed from Resolved to Closed

- % Done changed from 70 to 100

#4 - 05 Feb 2024 17:58 - Anna Maria Bigatti

- Related to Bug #1779: Radical error with lex (again) added

#5 - 06 Feb 2024 09:02 - Anna Maria Bigatti

- Related to Feature #1780: radical for ideals in SparsePolyRing: code in C++ added