

## CoCoA-5 - Bug #1577

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

15 Feb 2021 22:48 - John Abbott

<b>Status:</b>	Closed	<b>Start date:</b>	15 Feb 2021
<b>Priority:</b>	Normal	<b>Due date:</b>	
<b>Assignee:</b>	Anna Maria Bigatti	<b>% Done:</b>	100%
<b>Category:</b>	bug	<b>Estimated time:</b>	0.00 hour
<b>Target version:</b>	CoCoA-5.4.0	<b>Spent time:</b>	0.80 hour
<b>Description</b>			
This should not happen:			
<pre>use QQ[x,y],lex; I := ideal(x*y +x, x^2 +x); radi := radical(I); --&gt; triggers error ERROR: Ring is not standard graded</pre>			
The error was triggered by a call to <b>DimQuot</b>			
I thought this had already been reported, but cannot find the issue.			
<b>Related issues:</b>			
Related to CoCoALib - Bug #1779: Radical error with lex (again)		<b>Closed</b>	<b>05 Feb 2024</b>
Related to CoCoALib - Feature #1780: radical for ideals in SparsePolyRing: c...		<b>Closed</b>	<b>06 Feb 2024</b>

## 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