

CoCoALib - Design #970

Weights in ElimMat?

11 Nov 2016 15:13 - Anna Maria Bigatti

Status:	In Progress	Start date:	11 Nov 2016
Priority:	Normal	Due date:	
Assignee:		% Done:	10%
Category:	Improving	Estimated time:	0.00 hour
Target version:	CoCoALib-1.0	Spent time:	0.30 hour
Description (similar for ElimHomogMat) What should ElimMat([2,3], mat([[1,5,2]])); return? (now it is (a)) (a) $\begin{bmatrix} 0, & 1, & 1 \\ 1, & 5, & 2 \\ 0, & 0, & -1 \end{bmatrix}$ (b) $\begin{bmatrix} 0, & 5, & 2 \\ 1, & 5, & 2 \\ 0, & 0, & -1 \end{bmatrix}$ (c) $\begin{bmatrix} 0, & 5, & 2 \\ 1, & 0, & 0 \\ 0, & 0, & -1 \end{bmatrix}$			

History

#1 - 11 Nov 2016 15:35 - John Abbott

I prefer (c) to (b) perhaps because it is sparser.

(a) and (c) clearly do not give the same term-ordering though they are both clearly elimination orderings for indets 2 and 3.

What will you do if the weights are not given by a single row?

Case (a) clearly extends to any weights matrix; it is not so clear to me how to extend the other approach (just take first non-zero entry in the corresponding column?)

#2 - 11 Nov 2016 15:49 - John Abbott

- Status changed from New to In Progress

- % Done changed from 0 to 10

I suggest proceeding with definition (a):

- it is already implemented
- it is easy to explain/describe

If we come across an application where definition (a) is inappropriate then we can consider an alternative definition inspired by that application.