

INSTRUCTIONS FOR LAM

LAM is a version of the linear algebra program LA, modified to do arithmetic modulo some fixed integer. There is one new command which lets you change the modulus you are using. Apart from this, LAM has exactly the same commands as LA.

The current modulus

LAM has a current modulus, which is set to 2 when the program starts up. The current modulus need not be a prime number, but if it is not a prime number you may find that trying to do things like invert a matrix gives you all sorts of error messages. You can use the `mo` command to see what the current modulus is and change it. Its format is as follows.

`mo n`

Changes current modulus to n . If n is omitted, the value of the current modulus will be printed and the current modulus will not be changed. If n is present it must be an unsigned integer between 2 and 46340 inclusive.

NOTE: Whenever you change the current modulus, any matrices or vectors you have will be interpreted in the new modulus - in other words, if you enter a matrix while the modulus is 3 and change the modulus to 5, then when you try to invert the matrix the calculation will be done mod 5, not mod 3.

Numbers

Wherever LA uses rational numbers, LAM uses integers, which are always reduced modulo the current modulus as soon as they are entered into the program.

Column width

The default output column width is 5 in LAM, instead of 7.