

In this document we give brief instructions to run the Mathematica program at Linux (they might work unmodified also at macOS). All the files required to run the programs are in the folder for the respective Hecke algebra.

First we run the program `Mairi.g` in order to extract the GAP data by running the following command in the GAP directory containing the binary files:

```
[gap-directory]$ sh gap.sh Mairi.g
```

Then the text files `basis`, `dataCharIrr`, `dataHyp`, `dataParams`, `dataR` and `dataS` are exported. Now we move these files to our directory and in there we run the following command

```
[our-directory]$ sh GAP2Mathematica.sh
```

The file `GAP2Mathematica.sh` converts the data from GAP to the Mathematica format. For example, GAP uses the symbols "[" and "]" for opening and closing a list, but Mathematica uses "{" and "}". This procedure exports six files, named exactly as the files above but with the added suffix `Math`.

Finally, we open the file `HeckeCRG.nb` in Mathematica and we run the program. At the end it exports the files `trMat.txt` (for the matrix A or its first column), `trMatG.txt` (for the third condition) and `det.txt` (for the value $\det A$).