Using Maple and Mathematica

These notes provide a brief introduction to the use of Maple and Mathematica in the MLC.

1. GETTING STARTED

You can find Maple and *Mathematica* in the `Mathematical Software` folder on the desktop. There are also shortcuts to them on `poole`, which you can find as follows:

- Add the network place `\\poole\ClassFolders`.
- Browse to `\\poole\ClassFolders\Math-Dray`.
- Double-click on `Map Onid Drive`.
- Double-click on the Maple or *Mathematica* icons.

2. MAPLE

- Start Maple as above.

  End each Maple command with a semicolon, then press enter.

  Starting Maple from `\\poole\ClassFolders\Math-Dray` runs the simpler "classic" frontend, whereas starting Maple from the desktop runs the newer, `java`-based frontend.

- Try the following commands:

```
x:=7;
x+2;
plot(sin(u),u=0..2*Pi);
```

3. MATHEMATICA

- Start *Mathematica* as above.

  To execute a command, hold down the shift key while pressing enter.

- Try the following commands:

```
x=7
x+2
Plot[Sin[u],{u,0,2*Pi}]
```

4. TAXICAB GEOMETRY

- After starting *Mathematica*, a basic package for drawing figures in Taxicab Geometry can be loaded with the command:

```
<<\\poole\ClassFolders\Math-Dray\taxicab.m
```

- Try the following commands:

```
TDraw[TCircle[{1,2},2]
TDraw[TEllipse[{1,2},{4,3},5]
TDraw[THyperbola[{-5/2,1/2},{7/2,7/2},1]
```

5. LaTeX

The most commonly used software for typesetting mathematics is LaTeX, which is available in several different forms in the `latex` folder on the desktop. One especially powerful option is `Scientific Workplace`, which incorporates the use of Maple to do computations, as well as LaTeX to typeset the result. Try starting it and working through the tutorial.