

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* shortcuts on the desktop. There are also shortcuts to them on `poole`, which you can find as follows:

- Browse to `\\poole\ClassFolders\Math-Dray`.
- Double-click on the Maple 14 or *Mathematica 7* icons.

2. MAPLE

- Start Maple as above.

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

The semicolon is not necessary in the default 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. L^AT_EX

The most commonly used software for typesetting mathematics is L^AT_EX, which is available as `TeXnicCenter` in the MLC. Another option is `Scientific Workplace`, which incorporates the use of Maple to do computations, as well as L^AT_EX to typeset the result. Try starting it and working through the tutorial.