

# Further Pure with Technology CPD – Warwick University, November 12<sup>th</sup> 2015



This CPD day is particularly relevant to those teaching or considering teaching MEI's Further Pure with Technology Unit. It will also be of interest to teachers who wish to incorporate the use of tools from technology such as Computer Algebra Systems and general coding into maths lessons.

The first two sessions focus on using Geogebra and Python in mathematics teaching and enrichment. A small amount of experience of using Geogebra will be assumed. No experience of using Python will be assumed but a basic familiarity with general coding principles such as variables and conditional statements is necessary.

The following sessions focus on using these technologies in teaching MEI's Further Pure with Technology unit. There will be further opportunities to be hands-on with Geogebra and Python in this sessions which will also include review and discussion of past paper questions.

In [1]: 

```
def primesmall(n):  
    for i in range(2,n):  
        if n % i == 0:  
            print i
```

In [2]: 

```
primesmall(100)
```

2  
4  
5  
10  
20  
25  
50

CAS

gradient(x):=Derivative[f(x)]

1  → gradient(x) :=  $\frac{x^3 - 2}{x^3}$

2  Solve[gradient(x)=0]

→  $\{x = \sqrt[3]{2}\}$

Graphics

a = 3  
n = 2

General advice and information will also be provided about the Further Pure with Technology Unit but it is not necessary to be teaching this unit to attend the day.

### Provisional Timetable for the Day

Time	Topic
0930-1025	Using Geogebra (including its CAS) in maths lessons
1025-1125	Programming with Python, including enrichment ideas for years 10 – 12.
1135 - 1230	Teaching FPT – Investigation of Curves, including review and discussion of past paper questions
1230 - 1330	Lunch (provided)
1330 - 1430	Teaching FPT –Complex Variables, including review and discussion of past paper questions
1430 - 1530	Teaching FPT – Programming for Number Theory, including review and discussion of past paper questions

Presenter –

**Dr Richard Lissaman, MEI Online Resources Coordinator**

### How to book a place

This is a free course. To book a place please contact Richard Lissaman [richard.lissaman@mei.org.uk](mailto:richard.lissaman@mei.org.uk). You will need to bring your own laptop and will be advised about installing Geogebra and Python (both of which are free) ahead of the day.