

# Further Pure with Technology CPD – Birmingham University, November 27<sup>th</sup> 2014



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 sixth form maths lessons.

Morning sessions focus on using Geogebra, Python and the TI-Nspire in mathematics teaching. A small amount of experience of using Geogebra will be assumed. No experience of using Python or the TI-Nspire will be assumed but a basic familiarity with general coding principles such as variables and conditional statements is necessary.

Afternoon sessions focus on using these technologies in teaching MEI's Further Pure with Technology unit.

```
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

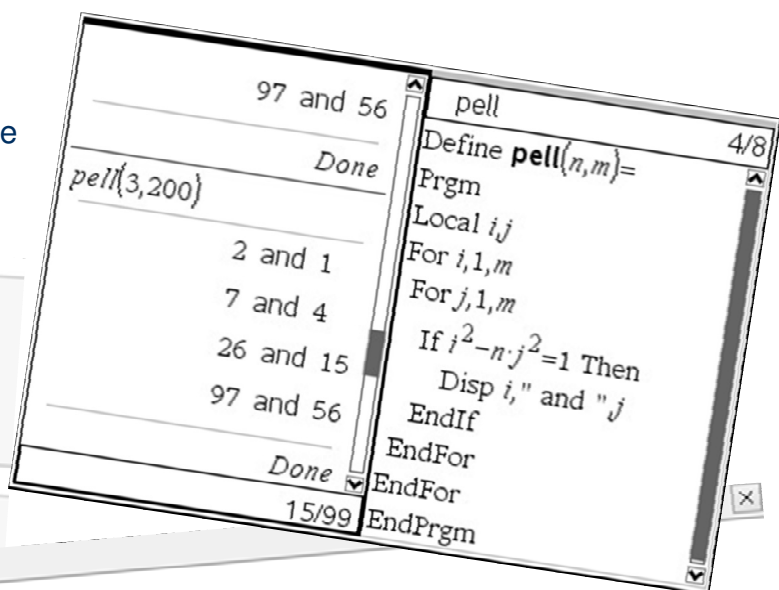
CAS

1 Expand[(x+3)<sup>7</sup>]

$$\rightarrow x^7 + 21x^6 + 189x^5 + 945x^4 + 2835x^3 + 5103x^2 + 5103x + 2187$$

2 Factorise[x<sup>3</sup>+x<sup>2</sup>+x+1]

$$\rightarrow (x+1)(x^2+1)$$



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 and CAS on the TI-Nspire in maths lessons
1135 - 1230	Incorporating programming with Python into maths lessons
1230 - 1330	Lunch (provided)
1330 - 1430	Teaching FPT – Investigation of Curves and Complex Variables
1430 - 1530	Teaching FPT – Programming for Number Theory

**Presenters – Tom Button, MEI Learning Technology Specialist  
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 any free software that you should have installed ahead of the day.