

Python Key Stage 3 Workbook – Teacher’s notes on Python Maths functions:

`+`, `-` plus and minus as you would expect

`*` times (multiply) – computers use the `*` instead of `x`, to save confusion between the symbol and the letter

`/` is division - note that Python 2.7 will answer with an integer if the numbers given are all integers, regardless of whether there should be a decimal portion, e.g. `7/2=3`, not `3.5`. If you want the decimal portion as well, make sure you input numbers with a decimal, even if there is nothing after the decimal, e.g. `7/2.0=3.5` as you would expect.

`7%3` is modulus – this is complementary to the `/`, and gives the remainder of whole number division. So `7%3=1`.

`2**3` – puts the first number to the power of the second number. The equivalent of 2^3 .

`3==3` answers True or False depending on the numbers. Read `==` as “is equal to”, which is a **comparison**, as opposed to `x=3` which is an **assignment**, setting the variable `x` to the value 3.

`4<6` another comparison – is less than. Replies True or False.

`4>6` another comparison – is bigger than. Replies True or False.

`4!=6` another comparison – is not equal to. Replies True or False.

`range(100)` prints out all the numbers in the range, starting at 0 and ending with the number before the number in brackets, therefore offering in this case 100 different numbers from 0 to 99. This would be a good time to point out that computer scientists often start counting at 0 rather than 1.

Random numbers

If you want to generate random numbers, first put the statement

```
from random import *
```

Then you can use `randint(x,y)` to generate a random number between `x` and `y`

for example

```
number=randint(1,10)
```

```
print number
```

This opens up all sorts of possibilities for guessing games etc.