

Emphasize that this will be a quick intro. We'll come back to this stuff again in more detail starting next time.

Walk them through Graphics file installation.

There should be a link on today's details page.

IDLE 1.2.1

```
>>> # Transcript for Catapult first session (point out the comment)
```

```
>>> 3 + 4
```

```
7
```

```
>>> 3 + 4 * 2 # Note that the answer is NOT 14.
```

Note the operator precedence

```
11
```

```
>>> 8 / 5 Explain that integer division gives us an integer.
```

```
1
```

```
>>> 8.0 / 5.0
```

```
1.6000000000000001 Why is the 1 at the end?
```

```
>>> width = 4
```

```
>>> height = 5
```

```
>>> width
```

```
4
```

```
>>> width, height
```

```
(4, 5)
```

```
>>> width = width + 2
```

```
>>> width
```

```
6
```

Mention case-sensitivity variable names and everything else in Python:

```
>>> Width # Width is not the same as width
```

```
Traceback (most recent call last):
```

```
File "<pyshell#0>", line 1, in <module>
```

```
Width
```

```
NameError: name 'Width' is not defined
```

```
>>> triangleArea = width * height / 2
```

```
>>> triangleArea
```

```
15
```

```
>>> def rectArea(height, width):
```

```
    return height*width
```

The above defines the rectArea function; now we call it.

```
>>> rectArea(6, 8)
```

```
48
```

What about built-in functions?

```
>>> abs(-7)
```

```
7
```

```
>>> sin(pi/3) # not everything is built in
```

```
Traceback (most recent call last):
```

```
File "<pyshell#17>", line 1, in <module>
```

```
sin(pi/2)
```

```
NameError: name 'sin' is not defined
```

```
>>> math.sin(math.pi)
```

```
Traceback (most recent call last):
```

```
File "<pyshell#24>", line 1, in <module>
```

```
math.sin(math.pi)
```

```
NameError: name 'math' is not defined
```

```
>>> import math
```

```
>>> math.sin(math.pi)
```

```
1.2246063538223773e-016
```

```
>>> from math import sin, pi
```

```
>>> sin(pi/2)
```

```
1.0
>>> from math import *
>>> sqrt(2)
0.8660254037844386
>>> (3 + 2j)*(2 -4j) # complex numbers!
(14-8j)

>>> #find out the names of the items imported from a module

>>> dir(math)

['__doc__', '__name__', 'acos', 'asin', 'atan', 'atan2', 'ceil', 'cos', 'cosh',
'degrees', 'e', 'exp', 'fabs', 'floor', 'fmod', 'frexp', 'hypot', 'ldexp', 'log',
'log10', 'modf', 'pi', 'pow', 'radians', 'sin', 'sinh', 'sqrt', 'tan', 'tanh']
```