

# Python Cheat Sheet

## Getting Started

1. Open Python IDLE
2. Create a new file
  - File > New File *Ctrl + N*
3. Save the file as *filename.py*
  - you MUST add the .py at the end
4. Write your code
5. Type F5 to save and run

## Turtle Graphics Setup

```
from turtle import *
```

```
# Create your pens
```

```
pen1 = Pen()
```

```
pen2 = Pen()
```

```
# Set the pen colors
```

```
pen1.color("green")
```

```
pen2.color("#336699")
```

```
# Draw
```

```
pen1.forward(100)
```

```
pen2.right(90)
```

```
pen2.fd(100)
```

## Let Python do your math

```
base = 10
```

```
height = 5
```

```
area = .5 * base * height
```

```
output = "The area of a triangle with a base of "
```

```
output += str(base) + " and height of " + str(height)
```

```
output += " is " + str(area)
```

```
print(output)
```

## Turtle Graphics Movement

```
forward(50) | fd(50)
```

```
backward(50) | bk(50) | back(50)
```

```
right(90) | rt(90)
```

```
left(180) | lt(180)
```

```
goto(0,0) | setpos(0,0) |
```

```
setposition(0,0)
```

```
setx(50)
```

```
sety(50)
```

```
home()
```

```
circle(360)
```

```
speed("fastest")
```

*Note: the numbers in the parentheses mean either pixels or degrees. You can put whatever number you like*

## Simple Interview

```
name = input("What is your name?" )
```

```
age = input("\nHow old are you? ")
```

```
print("\nYour name is " + name)
```

```
print("\nYou are " str(age) + " years old")
```

## Repeat

```
for i in range(25):  
    print( "Number is " str(i) )
```

```
for side in range(4):  
    pen1.fd(40)  
    pen1.right(90)
```

## Functions

```
# Define the function
```

```
def polygon(pen, sides, length):
```

```
    pen.fd(length)
```

```
    pen.right(360 / sides)
```

```
# Call the function
```

```
    polygon(pen1, 5, 75)
```

```
    polygon(pen2, 4, 100)
```

## Credits

Chris Winikka (HundredVisions.com © 2013) with much help from...

Overview over available Turtle and Screen methods  
<http://docs.python.org/2/library/turtle.html>