Part 1: Computer Components

1. CPU: The CPU also known has the central processing unit is the brain of the computer, it performs all of the calculations for the computer.
2. GPU: Some computers don’t have a dedicated graphics card because they simply do not need the power they provide, most people who buy them are using them for gaming or crypto currency mining.
3. RAM: Random Access Memory, used to store temporary data, for example if you open chrome the ram will remember where chrome is opened, when you want to open it again its almost instant, but when starting for the first time after boot up, the ram has to relearn that location, which is why it takes a bit longer.
4. HDD: These are the most common data storage devices found in any PC, they can be used to install the OS along with anything else. They are quite cheap now, like a 2TB is 89$
5. Motherboard: This is where every single part of the computer is connected to, whether it be the CPU, GPU, HDD, Front Panel Connectors, or whatever else you may want to add.

Part 2: Commands

1. print() 🡪 It takes in a variable, or String value, it is used to print/display text to the screen.
2. abs() 🡪 Takes in a number, it will return the absolute value of a number.
3. dir() 🡪 It takes in an optional argument, when it doesn’t have an argument in the function it will return all the local scoped variables, when it has an argument, it will return a list of attributes for that object.
4. pow() 🡪 Takes in a 2 parameters, with an optional 3rd. pow(x, y, z) this will return x to the power of y if z is not there, but if z is there it will return x to the power of y module z. These values must be numbers.
5. round() 🡪 This will round the number that you inputted, to the nearest whole number, like 5.3 to 5. This requires an parameter
6. type() 🡪 When you input the parameter, it will return the type of variable it is, whether it be a string, Boolean, float, or integer.
7. help() 🡪 The help function is used to learn about something in python, when you use it without any inputted data it will return a help page, which you can use, but say if you do something like this help(int) it will show a help page for the int data type.

Part 3 – Numbers

***1***

1. 1288
2. 0.4107142857142857
3. 862.39
4. 11
5. 208.46499999999997
6. 7.0

**2**

1. int
2. float
3. float
4. int
5. float
6. float

**3:** Yea I was right

**4**

1. math.ceil(4.6) : **5**
2. math.floor(76.43) :**76**
3. math.ceil(89.98) : **90**
4. round(10.5) : **10**
5. math.sqrt(49) : **7.0**
6. math.cos(12) : **0.8438539587324921**
7. math.sin(45) : **0.8509035245341184**

**5**

1. 27
2. 25
3. 2401
4. 256
5. 0.5
6. 4.0

Part 4 – Variables

**1**

1. apples = 7
2. **print** (apples)
4. apples = 12
5. **print** (apples)

**2**

**Apples = 3**

**.. appLES = 3**

**.. apples3 = 3**

**.. apples 3 = 3**

**.. 3apples = 3**

**.. Apples\_3 = 3**

**.. applesAreNice = 3**

**.. I\_have\_3\_apples = 3**

Traceback (most recent call last):

File "python", line 4

apples 3 = 3

^

SyntaxError: invalid syntax

Yea you can’t exactly have a space in the variable name

**3**

*Code:*

1. apples = 3
2. oranges = 4
3. bananas = 5
5. **print** (apples, oranges, bananas)
7. #Set the amount of aples to amount of oranges (4)
8. apples = oranges
10. **print** ("Total Apples: ", apples)
12. apples = 4
13. oranges = 5
14. bananas = apples
16. **print** ("Total Apples: ", apples)
17. **print** ("Total Bananas: ", bananas)
19. oranges = 7 - 4
20. apples = 2 \* 8
22. **print** ("Total Oranges: ", oranges)
23. **print** ("Total Apples: ", apples)
25. apples = 7
26. oranges = apples + 2
28. **print** ("Total Oranges: ", oranges)
30. oranges = 4
31. apples = oranges \* 2
33. **print** ("Total Oranges: ", oranges)
35. bananas = 8
36. bananas += 2
38. **print** ("Total Bananas: ", bananas)
40. oranges = 8
41. apples = 3
42. bananas = oranges - apples
44. **print** ("Total Bananas: ", bananas)
46. oranges = 8
47. apples = 3
48. bananas = oranges \* apples
50. **print** ("Total Bananas: ", bananas)

*Answers: (after It ran)*

3 4 5

Total Apples: 4

Total Apples: 4

Total Bananas: 4

Total Oranges: 3

Total Apples: 16

Total Oranges: 9

Total Oranges: 4

Total Bananas: 10

Total Bananas: 5

Total Bananas: 24

Part 5 – Strings

**1**

* + 1. Hello world!
    2. I am another string
    3. You can put nearly anything you like in a string
    4. Oh no an error

**2**

1. **print** ("Coding is fun")
2. **print** ("Coding \"is\" fun")
3. **print** ("\"Welcome\" the sign read, as we entered the rundown mansion.")
4. **print** ("\"Hi Emily,\" I said. \"How was your day?\"")

**3**

1. **print** ("Hello " + "World")

**4**

1. **print** ("bouncy, " \* 10)

Yea it just repeats bouncy, 10 times.

**5**

1. str\_1 = "I want the "
2. str\_2 = "bouncy "
3. str\_3 = "ball"
5. **print** ("A) ", str\_1 + str\_3)
6. **print** ("B) ", str\_2 + str\_3)
7. **print** ("C) ", str\_1 + str\_2 + str\_3)
8. **print** ("D) ", str\_1 + str\_2 \* 2 + str\_3)
9. **print** ("D) ", str\_1 + str\_2 \* 6 + str\_3)

Part 6 – Errors and Debugging

1. **print** ("I so got this!")
2. myColour = "Red"
3. **print** ("One potato " + "two potato " + "three potato more!")
4. theNumberTen = 10
5. **print** ("Almost finished!")
6. **print** ("Oh, I said. \"This is one's a little harder\"")
8. #Wasn't sure if you wanted the 'oh' inside quotes so yea