Basics Worksheet:

Data Type Practice :

Look at this list of variables, determine what data type each of these options are:

```
1    a = 4
2    b = 8.9
3    c = "hello"
4    d = [8, 9, 10]
5    e = {"a", "b", "c"}
6    f = None
```

Select three of these data types and explain a situation where you might be want to use this type.

What Would This Print Out? :

Take a look at the following piece of code:

```
1   print("Hello, World")
2
3   print("Hello," + "World")
4
5   print("Hello")
6   print(",")
7   print(" ")
8   print("World")
9
10  print('Hello, World')
11
12  print(Hello, World)
13
14  Hello = "Hello"
15  World = "World"
16
17  print(Hello + ", " + World)
```

What do you think that each of these would print out? Write out your prediction for each of these lines and then test it in VS Code. How accurate were your predictions?

What Error Would This Throw? :

Each of these sections of code will throw a different error. Predict what error, SyntaxError, TypeError, or NameError, each of these programs trigger. Then you can test these in VS Code and then explain what is wrong with each snippet.

```
1    def main() :
2    a = 2
3    b = 3
4    print(a + b)
```

```
1   def main() :
2       a = 7
3       answer = a + two
4       print(answer)
```

```
1    def main() :
2        a = "seven"
3        print(a / 3)
```

What Would This Print Out? (Part 2) :

Take a look at the following piece of code:

```
1   print(7 / 5)
2
3   print(7 // 5)
4
5   print(7 % 5)
6
7   print(7 * 5)
8
9   print(int(7 / 5))
10
11  print(float(6 / 2))
12
13  print(int(10) / 2.0)
14
15  print(float(8) * 3)
```

As above, what do you think that each of these would print out? Write out your prediction for each of these lines and then test it in VS Code. How accurate were your predictions?