1.) Why would you use a dictionary vs an array? Why would use a tuple vs an array?

A dictionary can provide for more readability in code. Since strings can be used for keys, the specific purpose of a dictionary value is easier to convey.

A tuple is very similar to a list, but is immutable, meaning read-only. In many cases, either tuple or list can be used, but immutable objects tend to be more efficient. Another consideration is security. If a class attribute, for example, is needed to be held constant, a tuple would be appropriate.

2.) Write a Python script that prints all lines containing "Apple" from a file called "file.txt".

See attached file “find\_apples.py”

3.) The file "results.txt" contains the following lines.

Time = 12.45 secs

Time = 10.2 secs

Time = 14.11 secs

Time = 9.8 secs

Time = 8.64 secs

Write a Python script that calculates the average time of all of the values.

See attached file “avg\_time.py”

4.) Write a Python script that creates a file called "Numbers.txt" and prints numbers from 1 to 100 in columns of ten separated by tabs. However, for any number ending in 5 or 0, print an asterisk instead of the number.

See attached file “create\_nums.py”

5.) There is a directory called "TestLogs". In that directory there are many different files. Files that end in .log contain information that we are interested in. There is a line in the file that begins with "DeviceInfo". That line contains 5 fields separated by tabs. Write a Python script that prints out the 3rd field in each file that ends in .log.

See attached file “print\_logs.py”