Intro To Python: Questions and Exercises

1) How many bits in a byte?

2) Do the following number conversions between binary, hexadecimal and decimal:

Convert this binary number to decimal: 1101
Convert this decimal number to binary: 37
Convert this hexadecimal number to decimal: FF
Convert this decimal number to hexadecimal: 120

3) Why do we need scripts that can be executed both from the command line and from an interactive GUI?

4) Why should importable modules containing functions and/or classes also be executable from __main__ scope?

5) Describe the Maya reload function and why it is used?

6) Python Exercise:
Using python lists and strings, demonstrate the difference between mutable and immutable data types.

7) Maya Python Scripting Exercise:
Create a function that builds a list of tuples containing keyframe, value pairs from input node attribute.
Extra points for creating a function with node as input and queries that node for keyed attributes, and then builds the list of tuples as described above. Function should return a dictionary with dictionary keys equal to node.attribute string.