**Class 1**

**Key Ideas**

* Python is interpreted, which means that code is executed one line at a time
* Python can be used interactively; you type code and Python responds with the result
* Using Python interactively, code is entered at a prompt (such as >>>)
* Spacing is very important in Python
* Variables store values that are not known ahead of time and/or can be modified
* Assignment statements are used to store a value in a variable
* There are mutable types (which can change) and immutable types (which cannot change)
* Number variables can be incremented (added to ) and decremented (subtracted from)
* Constants are values that will not change during the execution of a program
* Variables are created using assignment statements and deleted using **del**
* There are many built-in functions
* To use a function, call it by giving the name of the function and pass argument(s) to it in parentheses
* Many functions return a result
* The **print** function can display expressions
* Functions that do not seem to return anything (such as **print**) actually return a special value **None**
* Keywords cannot be used as variable names; all others including function names can be
* There are many built-in types
* Variables in Python are actually objects
* Types are actually classes
* Every type has built-in functions and operators that can be used, and special functions called methods
* Number types include **int**, **float**, and **complex**
* Numeric operators are either binary (operate on two operands) or unary (operate on one operand)

**Built-ins**

**Functions**

**round**: rounds a real number to an integer, or to a specified number of decimal places

**print**: prints results of expressions, separated by spaces

**type**: displays the type, or class, of an expression

**Statements**

**del** deletes a variable

**Operators**

Assignment =

Addition +

Subtraction –

Multiplication \*

Negation –

Exponentiation \*\*

Float division /

Integer division //

Remainder division %

**Assessment Questions on BB**

Which of the following variable names are valid? Check all that apply.

Length

length

lenght3

3length

length\_3

length 4

Which of the following expressions would result in the integer 2? Check all that apply.

6 – 4

-1 + 3

6 / 3.0

6 // 3.0

6 / 3

6 // 3