

Cues:	Notes:
Expression definition	1. Expressions <ul style="list-style-type: none"> <li>a. Any sort of programming statement or construct that can evaluate to a single value.</li> <li>b. Can be evaluated directly in the interactive shell.</li> <li>c. Example in IDLE: <ul style="list-style-type: none"> <li>i. <code>&gt;&gt;&gt; 2 + 2</code></li> <li>ii. <code>4</code></li> </ul> </li> <li>d. Python supports a variety of math operators in expressions. In order of precedence: <ul style="list-style-type: none"> <li>i. Parentheses: <code>()</code></li> <li>ii. Exponentiation: <code>**</code></li> <li>iii. Modulus/remainder: <code>%</code></li> <li>iv. Floored integer division: <code>//</code></li> <li>v. Floating-point division: <code>/</code></li> <li>vi. Multiplication: <code>*</code></li> <li>vii. Subtraction: <code>-</code></li> <li>viii. Addition: <code>+</code></li> </ul> </li> </ul>
Direct evaluation	
Math operators	
What an 'integer' is	2. Standard data types <ul style="list-style-type: none"> <li>a. Integers: <ul style="list-style-type: none"> <li>i. Whole numbers.</li> <li>ii. Examples: -1, 0, 1, 2</li> </ul> </li> <li>b. Floating-point numbers: <ul style="list-style-type: none"> <li>i. Fractional numbers.</li> <li>ii. Examples: -1.25, -0.5, 1.0, 3.14</li> </ul> </li> <li>c. Strings: <ul style="list-style-type: none"> <li>i. Arrays of bytes or characters; text.</li> <li>ii. Must be enclosed in single quotes (<code>'</code>).</li> <li>iii. Examples: <code>'abc'</code>, <code>'Hello world!'</code></li> <li>iv. Can be "concatenated" (meaning joined) or modified in other ways using standard operators. Example: <ul style="list-style-type: none"> <li>1. <code>&gt;&gt;&gt; 'Alice' + 'Bob'</code></li> <li>2. <code>'AliceBob'</code></li> <li>3. <code>&gt;&gt;&gt; 'Alice' * 5</code></li> <li>4. <code>'AliceAliceAliceAliceAlice'</code></li> </ul> </li> </ul> </li> </ul>
What a 'float' is	
What a 'string' is	
String operations	
What a 'variable' is	3. Variables <ul style="list-style-type: none"> <li>a. A container for storing a specific value or reference, e.g. one of the standard data types.</li> </ul>

Cues:	Notes:
Variable assignment	<ul style="list-style-type: none"> <li>b. Created on first use; initialized/changed using the assignment operator: =</li> <li>c. Example:               <ul style="list-style-type: none"> <li>i. &gt;&gt;&gt; foo = 'Hello world'</li> <li>ii. &gt;&gt;&gt; foo</li> <li>iii. 'Hello world'</li> <li>iv. &gt;&gt;&gt; foo = 'Goodbye'</li> <li>v. &gt;&gt;&gt; foo</li> <li>vi. 'Goodbye'</li> </ul> </li> </ul>
Naming variables	<ul style="list-style-type: none"> <li>d. Variable names must follow certain rules to make them “legal”. As stated in the textbook, the rules are:               <ul style="list-style-type: none"> <li>i. “It can be only one word.”                   <ul style="list-style-type: none"> <li>1. Meaning that it can’t have any spaces. It can be a phrase if the spaces are removed, ex. ‘currentAccountBalance’</li> </ul> </li> <li>ii. “It can use only letters, numbers, and the underscore (_) character.”</li> <li>iii. “It can’t begin with a number.”</li> <li>iv. “[Also, it] is a Python convention to start your variables with a lowercase letter,” as in the example above.</li> </ul> </li> </ul>

**Summary/Reflection:**

Being somewhat proficient in C++ and having a tiny bit of prior experience with Python, I felt like I had little difficulty understanding the concepts presented. However, I plan to practice using the exponentiation and integer-division operators in particular, because they were things that I hadn't been aware of previously.