1. For each of the following expressions, what value will the expression give? Verify your answers by typing the expression into Python. If the expression results in an error, explain why that error makes sense.

   a) 15 + 47
   b) 105 / 4.0
   c) 105.0 / 4.0
   d) 17 % 12
   e) -17 % 12
   f) 51 % 0
   g) 24 + 13 * 4
   h) (12 + 24) * 3
   i) 'Elephant' + 'Walk'
   j) 'Elephant' - 'Walk'
   k) 17 + '12'
   l) 'Texas' * 5
   m) 'Texas' * 0
   n) abs(-786)
   o) pow(2, 10)
   p) 3**9
   q) 'pig' > 'latin'
   r) 3 == 3.0
   s) 4 >= 3.999
t) $4! = 76$

u) $+ 47$

2. For each of the expressions in Question #1, write the result type that is obtained from the expression. For example, for Question #1 (a) the result type of $15 + 47$ is an integer or int.

a) If you don’t understand what a particular type means, please look it up in one of the resources listed on the course website and syllabus (e.g., I would recommend starting with Think Python: How to Think Like a Computer Scientist).

b) You can check your answers by using the type command in Python. For example, you can use `type (15 + 47)` or `type (62)` which in both cases will return int.

3. For each of the following phrases, express them as Python strings using the appropriate type of quotation marks (single, double or triple) and if necessary, escape sequences.

a) Texas A&M University

b) I’ll be back.

c) yes
no


4. Practice using the Python interpreter as a calculator. In your solution, please write the Python expression for each of the following problems.

a) The volume of a sphere with radius $r$ is $\frac{4}{3}\pi r^3$. What is the volume of a sphere with radius 5? Hint: Check your answer with a calculator.

b) Suppose the cover price of a book is $29.99, but the bookstores get a 40% discount. Shipping costs $3 for the first copy and 75 cents for each additional copy. What is the total wholesale cost for 60 copies.