Name: _____   **Date:** _____

CSCI-UA.0002 – Class #3
Types, Variables, Operators, and Comments

1. Write out the output of each line in the space provided. If the line results in an error, write "error".

   ```
   1.  Print(5 + "5")                    #1. "55"

   2.  a = "five"
       print("five " + a)               #2. "five five"

   3.  a = 5
       b = "15"
       print(a + b)                      #3. error (types don't match for +)

   4.  print(5 + int("5"))               #4. 10

   5.  print(str(5) + int("5"))          #5. error (types don't match for +)

   6.  print(15 / 2)                     #6. 7.5

   7.  print(-15 // 2)                   #7. -8

   8.  print(15 % 2)                     #8. 1

   9.  print(15 ** 2)                    #9. 225

   10. print(5 * 5 + 5)                  #10. 30
   ```
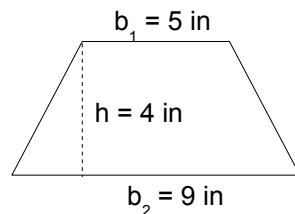
2. How many parameters (arguments) does the function, `str`, take? What, does the function, `str`, do?

   1 parameter, it converts the argument passed in into a string

3. The function, `input`, returns a value. What is the type of the value that it returns?

   str (a string)

4. Here's a trapezoid: The area of a trapezoid is:

   $$A = \frac{(b_1 + b_2) * h}{2}$$

   Write a program that calculates the area of the trapezoid above:

   1. Write a comment in your code that says: "Class #3 Handout".

   2. Declare 3 variables to represent height, base 1 and base 2. Set them equal to the values in the figure above.

   3. Declare a variable to represent area. Set it equal to an expression that calculates the area using the formula above.

   4. Print out "The area of the trapezoid is [area]", substituting the part in brackets with the corresponding variable.

   ```python
   """
   Class #3 Handout:
   """
   h = 4
   b1 = 5
   b2 = 9
   area = ((b1 + b2) * h) / 2
   print("The area of a trapezoid with the trapezoid is " + str(area))
   ```