COMP 1800 – Fall 2016
Classwork 7: Variables
(15 points)

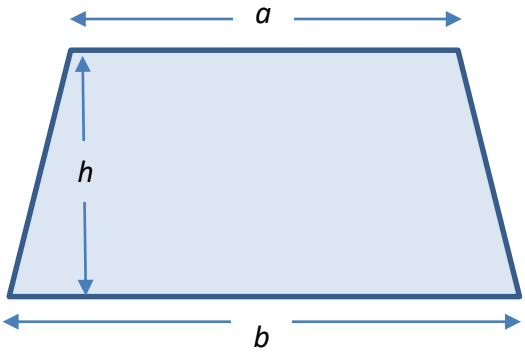
Number of People: Teams of up to 2. If you work with a teammate, only one submission is needed. Be sure to put both of your names on the paper. Feel free to ask me or Swaroop for help!

Due: Sept. 27, by the end of class

Submission: Turn in this assignment as a hard copy before the end of class; no electronic submission is necessary.

Grader: TA, Swaroop Goli (ssgoli@memphis.edu). Questions about grading? Please contact him first!

1. **(8 pts)** Your local pizzeria is trying out a new type of pizza marketed at geometry aficionados. (Yes, this is a rather niche market.) Instead of the usual circular shape, these are… TRAPEZOIDAL! See the diagram below. Imagine all the creative ways this could be sliced!



The manager is offering two deals: large pizzas (a = 12”, b = 14”, h = 8”) for $14.99 each, or the ‘MURICA-sized XL Capitalist Special (a = 18”, b = 24”, h = 12”) for $29.99 each. If you want to maximize your pizza per dollar, which is the better deal?

Let’s use variables to help us solve this problem. For each of the following parts, write the necessary Python code (two lines per part) to perform the indicated task.

a. Create two variables to store the area of a large pizza and the area of an XL pizza. Assign them the appropriate values based on our problem. (Consult the almighty Google if you’re not sure how to find the area of a trapezoid!)
b. Compute the amount of pizza you’re getting per dollar for each of the two deals. Store these values into two new variables.
c. Display the final results on the screen, using the format below. (The blanks should be replaced with the variable values computed by your code.)

```
Large pizza: ___ square inches per $
XL pizza: ___ square inches per $
```

2. **(7 pts)** Consider the following lines of Python code, and assume that they all run sequentially (one after another). What are the values stored in the variables **a** and **b** at the end of each labeled line? You should have 14 answers in all (list the values of **a** and **b** at the end of line 2, then the values of **a** and **b** at the end of line 3, etc.).

```
a = 2
b = a              # line 2
a = 10             # line 3
a + 8              # line 4
b = b + 2          # line 5
b % 4              # line 6
a = b % 2 * a      # line 7
b = (b + a)/2      # line 8
```