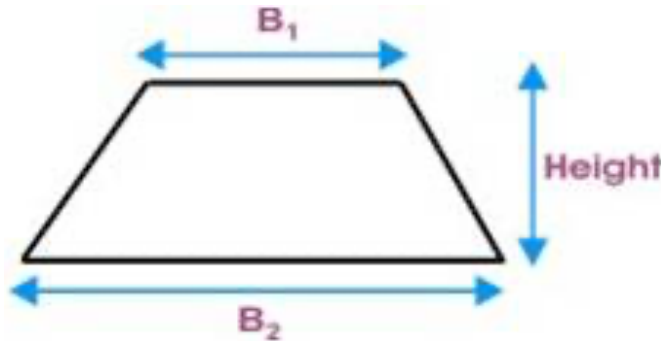


CALCULATE THE AREA OF A TRAPEZOID

Write a complete Python3 program called **assignment1.py** including comments. The first line should be a comment that includes your euid and name. The program should calculate the area of a trapezoid in square inches and square centimeters given inputs in inches. A trapezoid is a 4-sided shape having 2 parallel sides. See diagram below.



The formula for the area of a trapezoid is:

$$\text{Area} = 1/2 (B_1 + B_2) \text{Height}$$

Where:

Area is the area of the trapezoid

B₁ and **B₂** are the lengths of the parallel sides

Height is the height of the trapezoid

Square inches may be converted to square centimeters using the following formula:

$$\text{Square Centimeters} = 6.4516 \times \text{Square Inches}$$

Start by requesting the dimensions of the trapezoid from the user. Once you have read in the dimensions, calculate the Area in square inches and then convert square inches to square centimeters.

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For example, the output might look like this (input shown in **bold**):

```
wdj0017@cse05:~/csce1035$ python3 assignment1.py
Please enter B1 in inches: 3
Please enter B2 in inches: 5
Please enter the height in inches: 10
A trapezoid with B1= 3.0 in. B2= 5.0 in. and height= 10.0 in.
has an area of 40.0 square inches or 258.064 square centimeters.
```

Before writing the code, you may want to compute a hand example to verify that your program solution is correct and matches your example. Feel free to reference the Lab 02 program you worked with this week, or the class lecture notes to see how you might accomplish this.

Upload the following file to Canvas

- **assignment1.py**