

# Aer E 160 Python Lab 1

PAIGE

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## 1 Problem 1

Follow along with the TA as he goes through the "Hello, World" example. Be sure to include your code.

### 1.1 Problem 1 Code

### 1.2 Problem 1 Output

## 2 Problem 2

Write a program that will convert temperature from Celsius to Fahrenheit and display the end result. Use Equation 1 in your code.

$$T_f = \frac{9}{5}T_c + 32 \quad (1)$$

**Challenge Yourself:** Write your program that will convert the temperature both from Fahrenheit to Celsius as well as Celsius to Fahrenheit based on user input. You may use Equation 2 in your code.

$$T_c = (T_f - 32) * \frac{5}{9} \quad (2)$$

### 2.1 Problem 2 Code

### 2.2 Problem 2 Output

## 3 Problem 3

Calculate the Area and Volume of a Cylinder and display the result including your units in the print statement. Use Equations 3 and 4 in your code.

$$V = \pi r h^2 \quad (3)$$

$$A = 2\pi r^2 + 2h\pi r \quad (4)$$

**Challenge Yourself:** Perform the calculation with user prompted values and units.

### 3.1 Problem 3 Code

### 3.2 Problem 3 Output

## 4 Problem 4

Given the list:

M=[1,3,5,6,8]

Display:

1. The length of M
2. Starting at 1, every other number in the list
3. Reverse the list

#### **4.1 Problem 4 Code**

#### **4.2 Problem 4 Output**