

Interactive Exercises

All exercises must contain a header and comments

1. Ask the user for the length and width of a rectangle. Display the area and perimeter of the rectangle.

```
>>> [evaluate Interactive_Exercise_1.py]
Please enter the length of the rectangle: 2
Please enter the width of the rectangle: 6
The rectangle has an area of 12.0 and a perimeter of 16.0
```
2. Ask the user for a Celsius temperature. Display the equivalent temperature in Fahrenheit.

```
>>> [evaluate Interactive_Exercise_2.py]
Please enter a temperature in Celsius: 18
18.0 degrees Celsius equals 64.4 degrees Fahrenheit
```
3. Ask the user for a Fahrenheit temperature. Display the equivalent temperature in Celsius.

```
>>> [evaluate Interactive_Exercise_3.py]
Please enter a temperature in Fahrenheit: 68
68.0 degrees Fahrenheit equals 20.0 degrees Celsius
```
4. Ask the user for the lengths of four long jumps. Display the sum and average of these four jumps.

```
>>> [evaluate Interactive_Exercise_4.py]
Enter the length of your first jump: 1.9
Enter the length of your second jump: 2.1
Enter the length of your third jump: 2.5
Enter the length of your fourth jump: 1.8
The total of your four jumps is: 8.3
The average of your four jumps is: 2.075
```
5. Ask the user for the name of an item, its price and quantity ordered. Calculate and display the total price before tax, and after tax. (HST = 13%). Then ask the user for the amount they will be paying with. Display the amount of change they are to receive. **Note: the format command will help you to output a variable in currency format. [More on formatting.](#)**

```
>>> [evaluate Interactive_Exercise_5.py]
What is the name of the item you are buying? Parrot Drone
How much does a Parrot Drone cost? 399.99
How many Parrot Drones are you buying? 4
Total before tax:      $1,599.96
Amount of tax:         $207.99
Total after tax:       $1,807.95
Please enter the amount you will be paying: 2000
Change due:            $192.05
Thank you for your business!
```
6. Ask the user to enter two numbers. Output the results of addition, subtraction, multiplication, division, modulus, and exponent. Display the results accurate to one decimal place.

```
>>> [evaluate Interactive_Exercise_6.py]
Please enter the first number: 5.55
Please enter the second number: 4.88
5.5 + 4.9 = 10.4
5.5 - 4.9 = 0.7
5.5 x 4.9 = 27.1
5.5 / 4.9 = 1.1
5.5 % 4.9 = 0.7
5.5 ^ 4.9 = 4,287.0
```

Challenge Time!

7. Ask the user to enter an amount of change less than one dollar. Calculate and display the minimum number of quarters, dimes, nickels, and pennies necessary to make the change. (Hint: use the mod (%) operator).

```
>>> [evaluate Interactive_Exercise_7.py]
Enter an amount of change less than $1.00: 0.92
Pennies:      2
Nickels:      1
Dimes:        1
Quarters:     3
```

8. Ask the user to enter a two digit whole number. Display the two digits separately to the user. (Hint: mod (%) again!)

```
>>> [evaluate Interactive_Exercise_8.py]
Please enter a two digit whole number: 87
The first digit is:      8
The second digit:       7
```