Introduction to Programming: Problem Set 6

6.8 (*Conversions between Celsius and Fahrenheit*) Write a module that contains the following two functions:

```
# Converts from Celsius to Fahrenheit
def celsiusToFahrenheit(celsius):

# Converts from Fahrenheit to Celsius
def fahrenheitToCelsius(fahrenheit):
```

The formulas for the conversion are:

```
celsius = (5 / 9) * (fahrenheit - 32)
fahrenheit = (9 / 5) * celsius + 32
```

Write a test program that invokes these functions to display the following tables:

```
Celsius      Fahrenheit   |   Fahrenheit     Celsius

40.0         104.0        |   120.0          48.89
39.0         102.2        |   110.0          43.33
...
32.0         89.6         |   40.0           4.44
31.0         87.8         |   30.0           -1.11
```

***6.14** (*Estimate* π) π can be computed using the following series:

$$m(i) = 4\left(1 - \frac{1}{3} + \frac{1}{5} - \frac{1}{7} + \frac{1}{9} - \frac{1}{11} + \ \ldots \ + \frac{(-1)^{i+1}}{2i - 1}\right)$$

Write a function that returns `m(i)` for a given `i` and write a test program that displays the following table:

```
i                m(i)

1                4.0000
101              3.1515
201              3.1466
301              3.1449
401              3.1441
501              3.1436
601              3.1433
701              3.1430
801              3.1428
901              3.1427
```