Computer Science I	**Math**
Conditionals	70, 80, 90, 100 Point Version

Assignment Purpose:

The purpose of this assignment is check your understanding of math library methods.

To get the points for this assignment, you must write a program that outputs the same output for the tested values in the problem instructions.

Making the file:

1. Create a new Python file called: MathMethodLab_yourLastName

Grading:

To get a 70 you must complete 1 of the 4 mini labs.
To get an 80 you must complete 2 of the 4 mini labs.
To get a 90 you must complete 3 of the 4 mini labs.
To get a 100 you must complete 4 of the 4 mini labs.

Write a method called **distance** to

- find the distance between two input integers representing values on the number line
- find the distance between two input decimals representing values on the number line.

Test the following values to see if your code works.

```
3  5
-3.3  5.8
65  -88
24.9  1678.4
```

Output needs to be as follows (needs to be the **SAME**)

```
----jGRASP exec: python TypeTest.py
      The distance from 3 to 5 is 2
      The distance from -3.3 to 5.8 is 9.1
      The distance from 65 to -88 is 153
      The distance from 24.9 to 1678.4 is 1653.5

 ----jGRASP: operation complete.
```

Write a method called **areaVolumeLength** to

- the values need to be passed in as a parameter and
- find the area of a square whose side length is num.
- find the volume of a sphere whose radius is num.
- find the length of the side of a square whose area is num.

Test the following values to see if your code works.

```
5
82
```

Output needs to be as follows (needs to be the **SAME**)

```
----jGRASP exec: python TypeTest.py
      The area of a square whose side length is 5 is 25
      The volume of a sphere whose radius is 5 is 523.6
      The side length of a square whose area is 5 is 2.24
      The area of a square whose side length is 82 is 6724
      The volume of a sphere whose radius is 82 is 2309564.9
      The side length of a square whose area is 82 is 9.06

 ----jGRASP: operation complete.
```

Write a method called **sheetsPlywood** to

- find the minimum number of 4 X 8 sheets of plywood it would take to cover a roof when the total amount needed in square feet pasted in as a parameter.

Test the following values to see if your code works.

```
200
988
```

Output needs to be as follows (needs to be the **SAME**)

```
----jGRASP exec: python TypeTest.py
      A 200 square-foot roof needs a minimum of 7 sheets of plywood
      A 988 square-foot roof needs a minimum of 31 sheets of plywood

 ----jGRASP: operation complete.
```

Write a method called **maxDVDs** to

- find out the maximum number of DVDs Johnny can buy from Wal-Mart if the price for each DVD (including tax) is $8.99 and the amount of money he has in his wallet is a value pasted in as a parameter.

Test the following values to see if your code works.

```
26.25
53.94
```

Output needs to be as follows (needs to be the **SAME**)

```
----jGRASP exec: python TypeTest.py
      With $26.25, Johnny can buy 2 DVDs
      With $53.94, Johnny can buy 6 DVDs

----jGRASP: operation complete.
```