

Part 2:

According to Wikipedia, the surface area, A , of a sphere with radius r is:

$$A = 4\pi r^2.$$

The volume, V , of that sphere is:

$$V = \frac{4}{3}\pi r^3$$

Following the pattern used in class, create a Java class name Sphere that:

- asks the user to enter the radius of a sphere
- computes the surface area and volume of that sphere (use Math.PI to help), storing the result in a variable
- prints the results
- asks for a new radius (this does not require any new variables...reuse the old variables)
- computes and displays the new results

Here is a sample of what the program should look like when it is run. You should follow the same pattern for writing this program that we used in class (variable for user input, variables for results, cursor moves to the next line at the end). Try to match this as closely as possible:

```
Enter the sphere's radius: 2.5
surface area = 78.53981633974483
volume = 65.44984694978736
Enter a new radius: 10
surface area = 314.1592653589793
volume = 4188.790204786391
> |
```

Once working, you must demonstrate the results to your instructor. **Then, ZIP the folder containing your source code file, and upload the file.**

Checklist:

- Showed work to instructor/TA? _____
- Java program gives correct mathematical results? _____
- Other formatting correct (spacing, spelling, etc.)? _____
- Source code follows style guidelines? _____
- Work submitted to Canvas as a zip file? _____