

**ENGINEER 1D04**  
**Engineering Computation**  
**McMaster University, Winter 2010**

**Lab 3 Marked Assignment 1 Solution**  
**Friday Lab**

Revised: 27 January 2010

**Correctness**

Circle Radius Input	Tube Radius Input	Output 1	Output 2
2.5	4.2	414.5234	1658.0935

**Design Question**

Coding the formula just once using a separate method will:

1. Decrease the size of the code.
2. Increase the understandability of the code.
3. Increase the maintainability of the code.
4. Increase the reusability of the code.

**Testing Question**

Only one test case for admissible inputs is necessary to exercise the code for the **Calculate** button since the code does not contain any conditionals or loops. (Note: Additional test cases could be used for inadmissible inputs such as negative numbers and empty text boxes.)