



# Introduction to Programming with Java

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## Task: CylinderCalculator

Score: ★☆☆☆☆

Prerequisites: ACM Task Force Commands

### Description:

Write a program that calculates the *area* and *volume* of a cylinder whose *height* and *base circle radius* is entered.

Follow the following implementation path:

1. Implement **circlePerimeter** function

$$Perimeter_{circle} = 2\pi r$$

2. Implement **circleArea** function

$$Area_{circle} = \pi r^2$$

3. Implement **area** function by reusing **circleArea** and **circlePerimeter** functions.

$$Area_{cylinder} = 2 \times Area_{circle} + height_{cylinder} \times Perimeter_{circle}$$

4. Implement **volume** function by reusing **circleArea** function

$$Volume_{cylinder} = Area_{circle} \times height_{cylinder}$$

