

# Dr Oliver Mathematics

## Worked Examples

### Mensuration 1

**From:** IGCSE 2011 Paper 3H Q23: Calculator

1. The diagram shows a solid cylinder and a solid sphere.

(5)

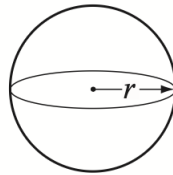
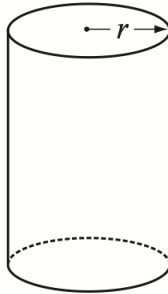


Diagram **NOT**  
accurately drawn

- The cylinder has radius  $r$ .
- The sphere has radius  $r$ .

Given that

$$\frac{\text{Total surface area of cylinder}}{\text{Surface area of sphere}} = 2,$$

find the value of

$$\frac{\text{Volume of cylinder}}{\text{Volume of sphere}}.$$