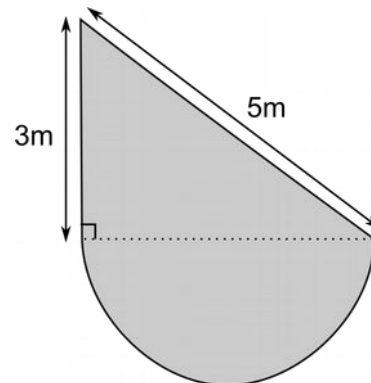
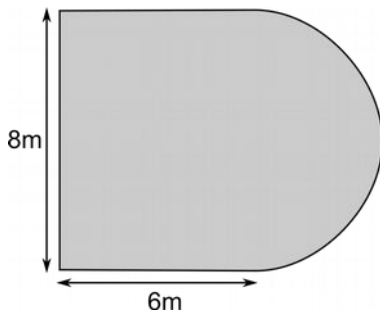
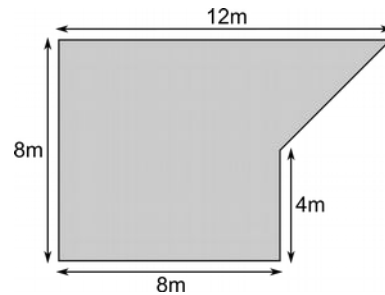
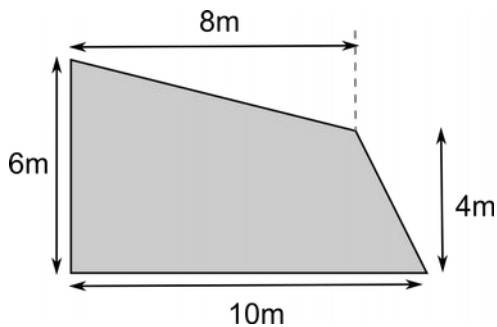


# Numbers, Areas, Volumes – Tutorial

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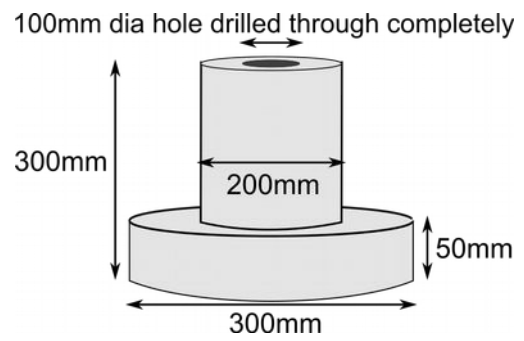
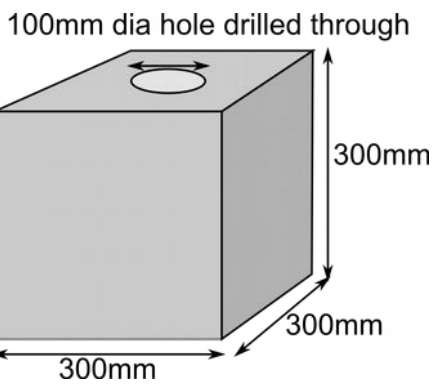
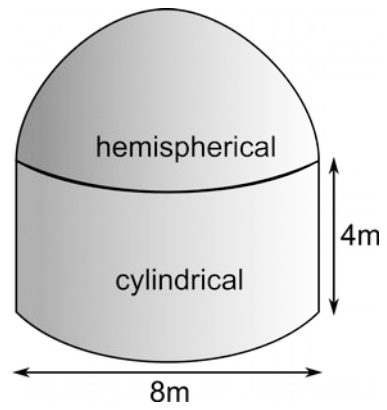
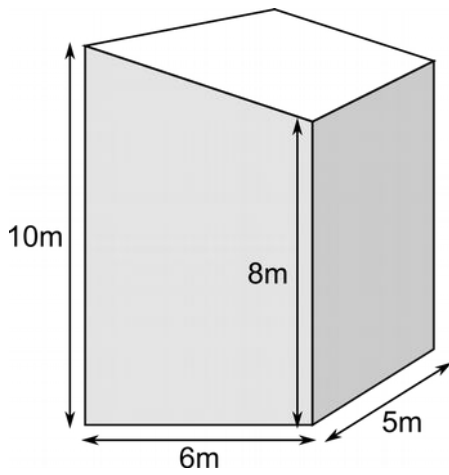
1. Write in standard form:
  - (a) the number of sheets of paper, each 0.10mm thick that make a pile 1.0cm high,
  - (b) the number of 1p coins, diameter 20mm, lined up edge to edge, that make a 1.00km line,
  - (c) the number of  $m^2$  in a square kilometre,
  - (d) the number of litres in a cubic metre. ( $1.0 \times 10^2$ ,  $5.0 \times 10^4$ ,  $1 \times 10^6$ ,  $1 \times 10^3$ )
  
2. Calculate the area in  $m^2$  of one surface of:
  - (a) an A5 sheet of paper, 210mm x 148.5mm,
  - (b) a dinner plate, diameter 26cm. ( $3.12 \times 10^{-2} m^2$ ,  $5.3 \times 10^{-2} m^2$ )
  
3. A room is 2.5m high and the floor size is 3.4m x 4.4m. Calculate:
  - (a) the volume of air that it contains.
  - (b) the total area of the ceiling and walls. (7:  $37 m^3$ ,  $54 m^2$ )
  
4. Calculate the volume of a ball bearing, diameter 4.0mm,
  - (a) in  $mm^3$ ,
  - (b) in  $m^3$ . ( $34 mm^3$ ,  $3.4 \times 10^{-8} m^3$ )
  
5. Calculate the areas of the following floor plans:



(hint: find diameter of semicircle)

( $44 m^2$ ,  $72 m^2$ ,  $73 m^2$ ,  $12 m^2$ )

6. Calculate the volumes of the shapes below:



$(270m^3, 335m^3, 2.46 \times 10^{-2}m^3, 9.03 \times 10^{-3}m^3)$