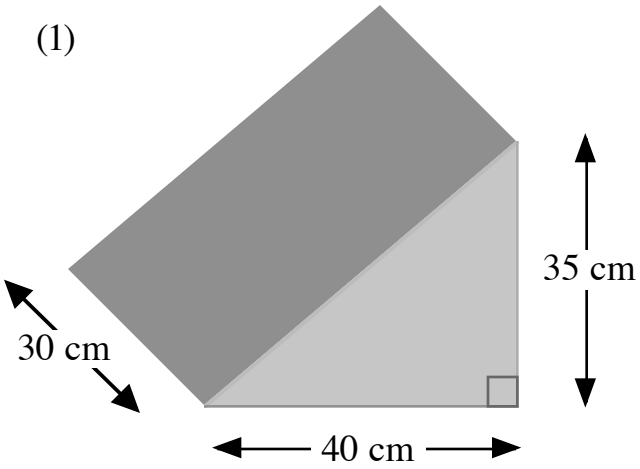
PRISMS

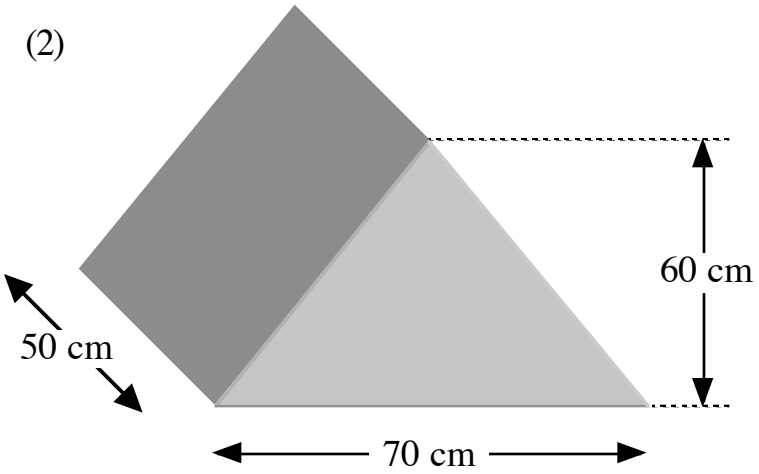
In each of the following calculate: (a) the area of the front face of the prism
(b) the volume of the prism.

Questions 1 to 10 do **not** require a calculator.

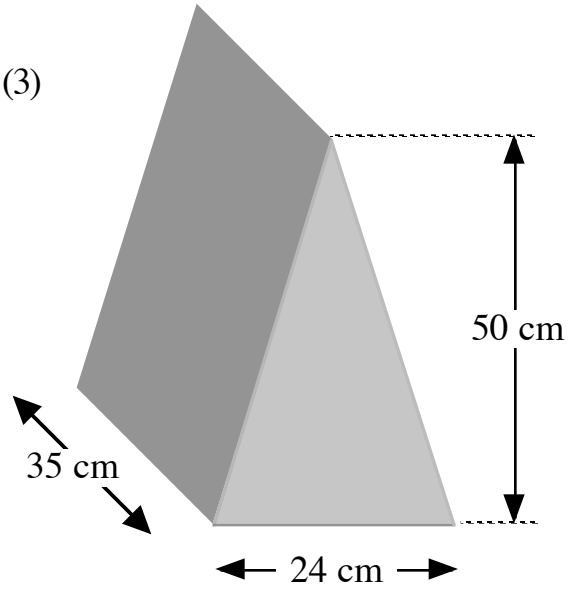
(1)



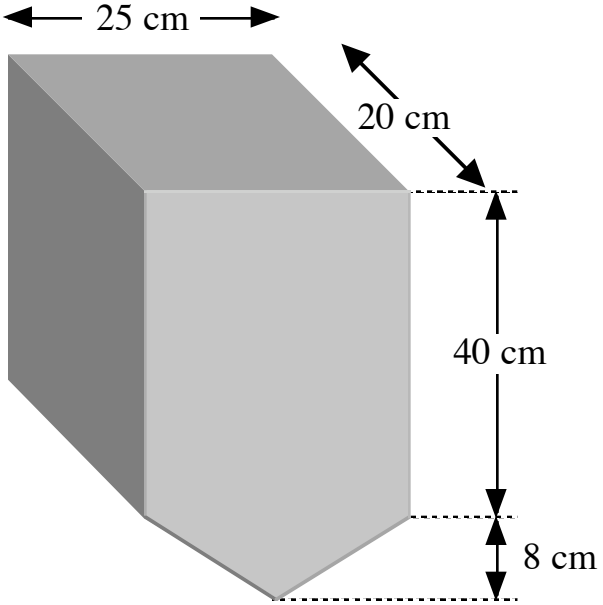
(2)



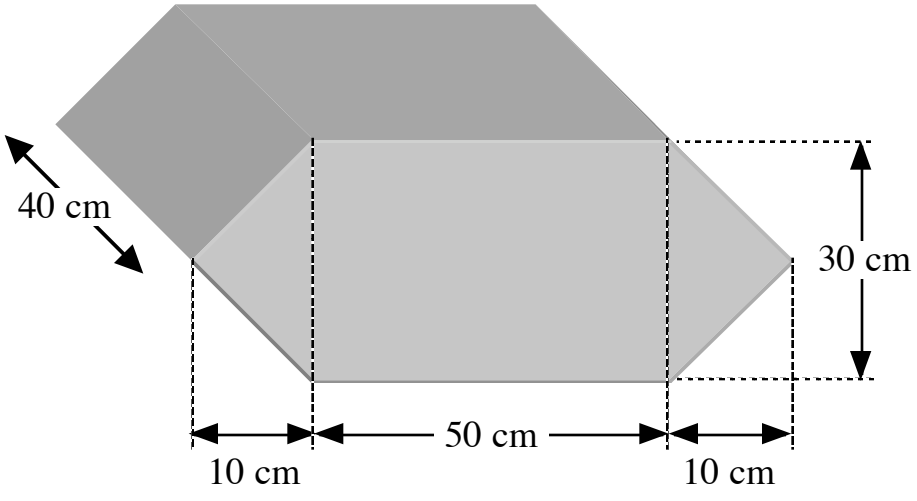
(3)



(4)

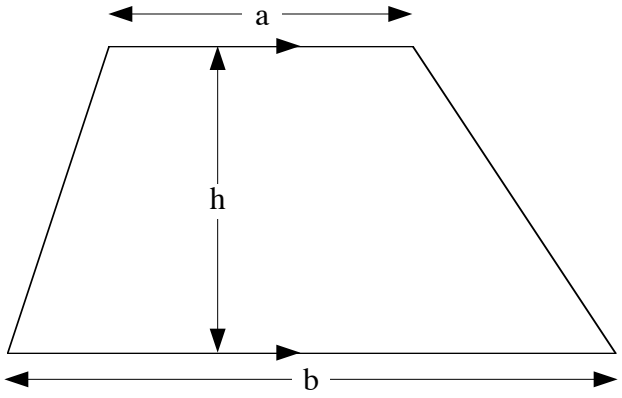


(5)

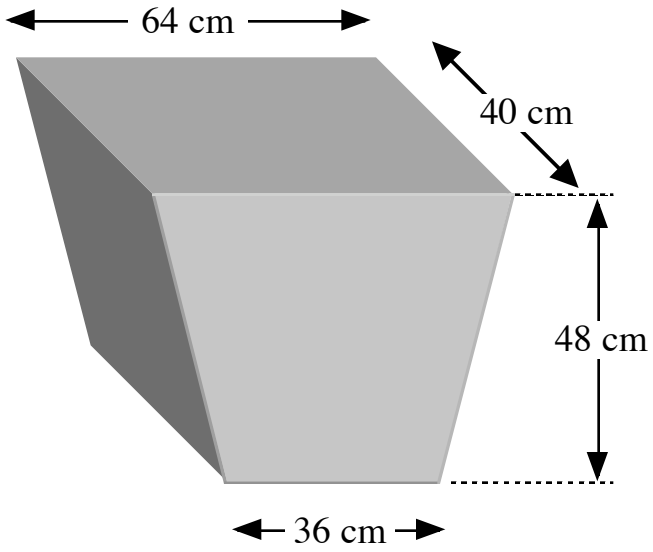


In the following the front face involves a trapezium.
Use the formula below to find the area of the trapezium.

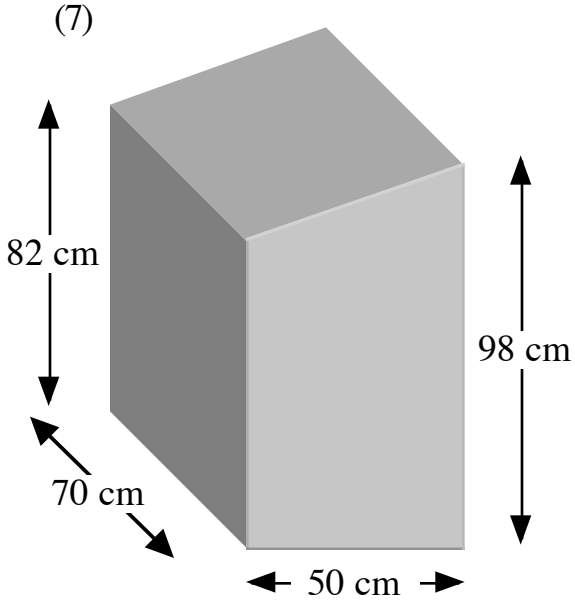
Area of a trapezium : $\text{Area} = \frac{1}{2}h(a+b)$



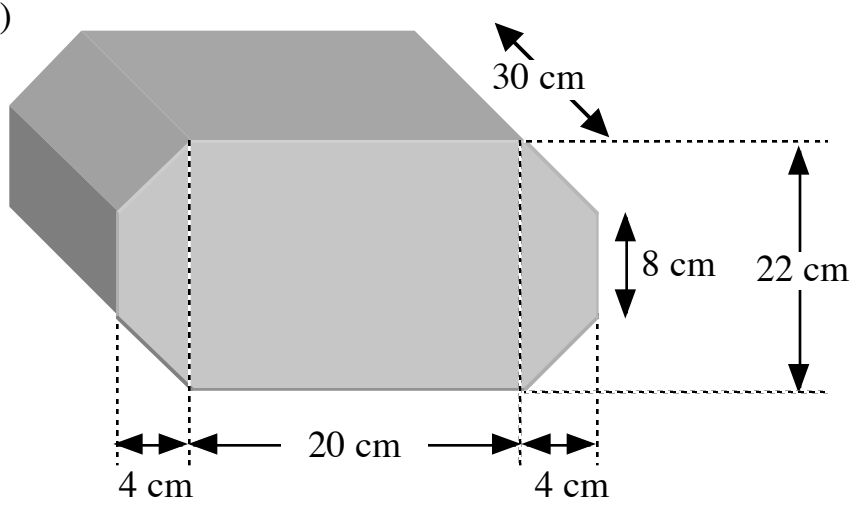
(6)



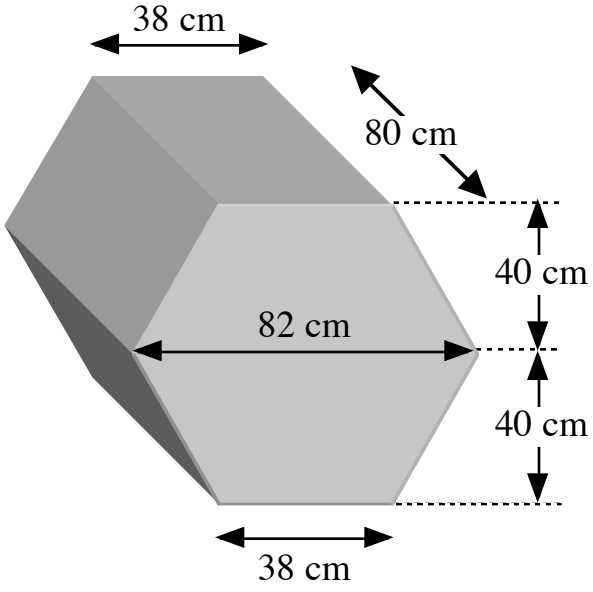
(7)



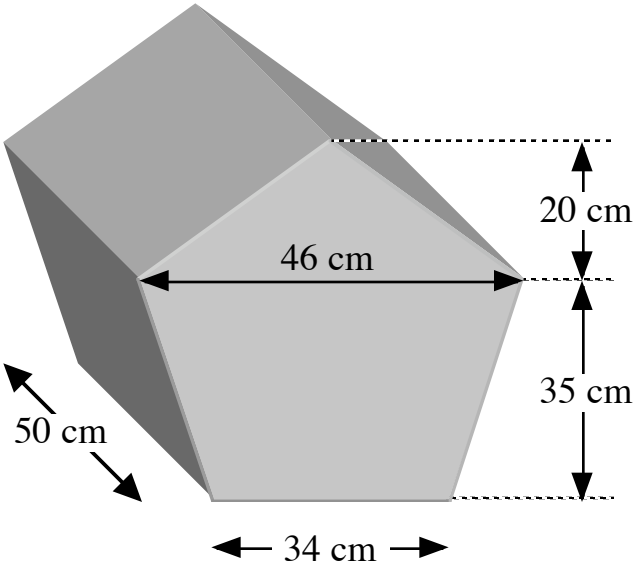
(8)



(9)

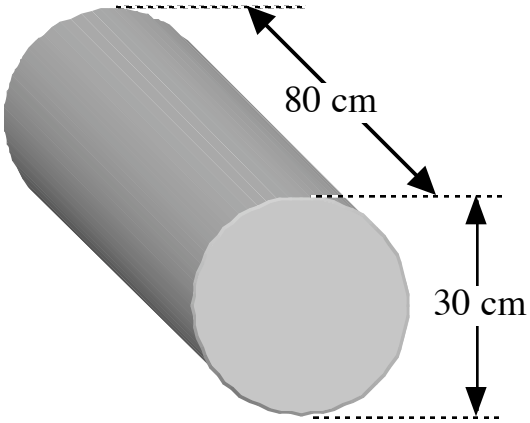


(10)

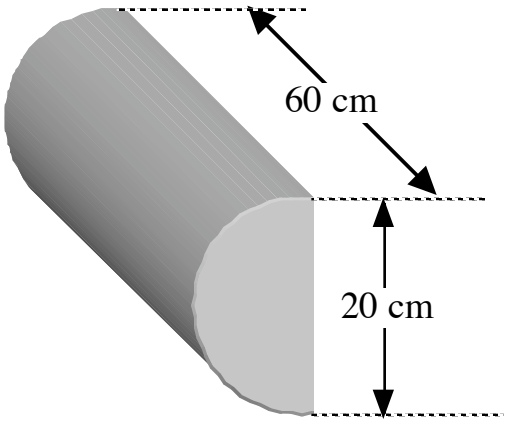


In the following the front face involves circles, semi-circles or quarter circles.
Use π from the **calculator** and the **unrounded** answer from part (a) to calculate part (b).

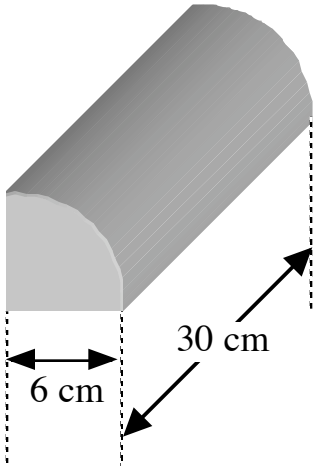
(11)



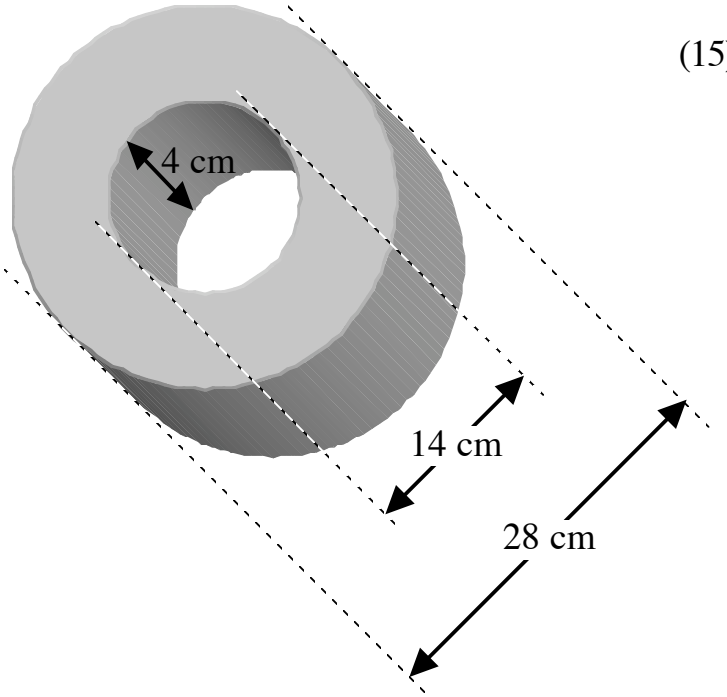
(12)



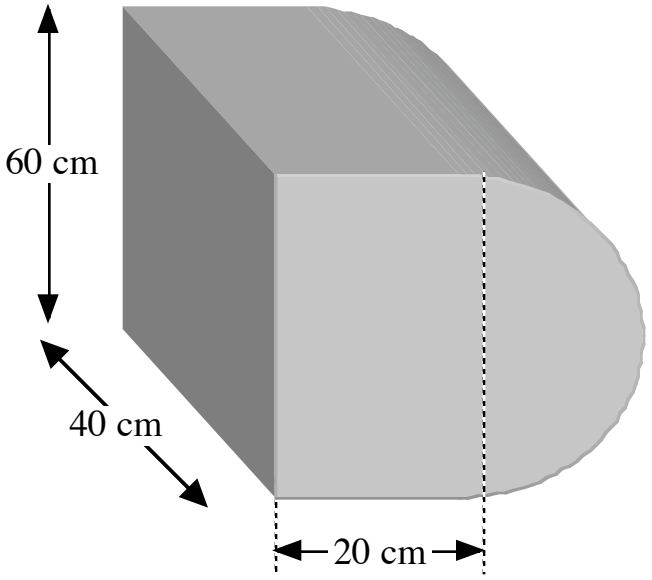
(13)



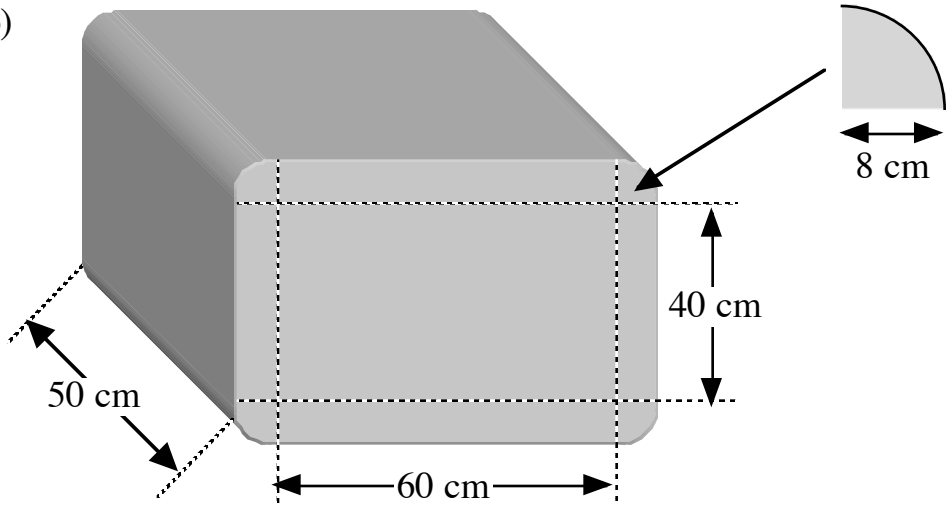
(14)



(15)



(16)



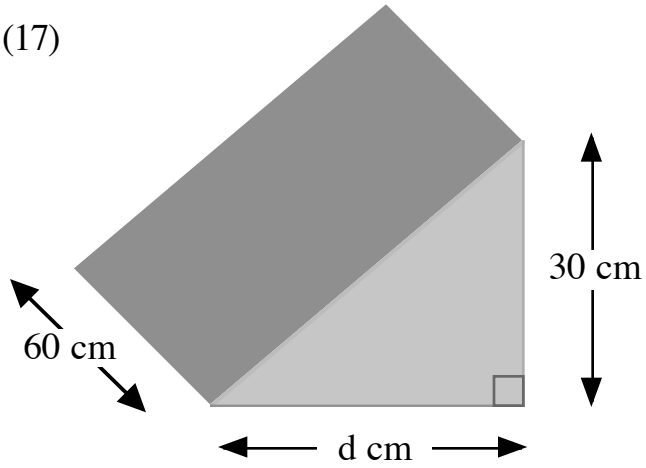
In each of the following the volume of the prism is given.

Calculate: (a) the area of the front face of the prism

(b) the missing dimension, d, of the prism.

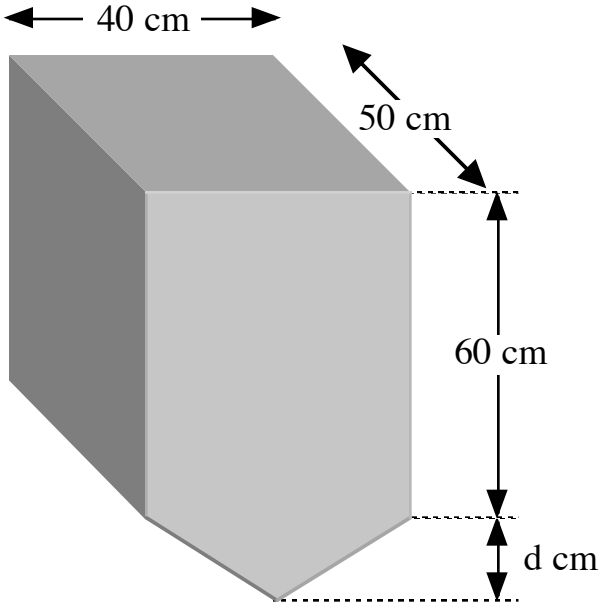
Questions 17 to 20 do **not** require a calculator.

(17)



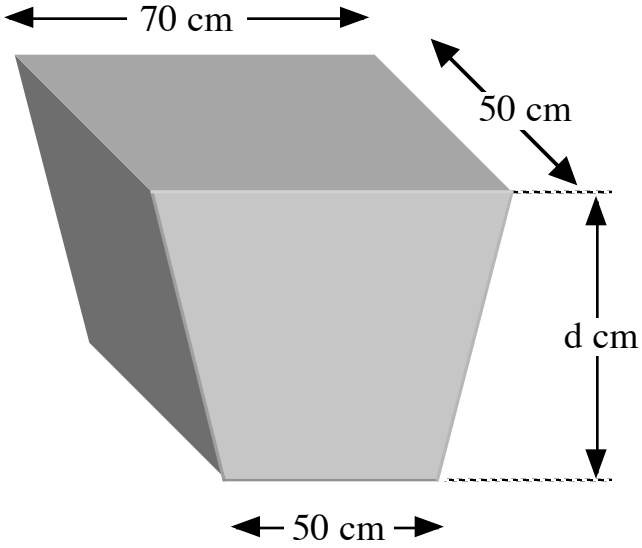
volume 36000 cm^3

(18)



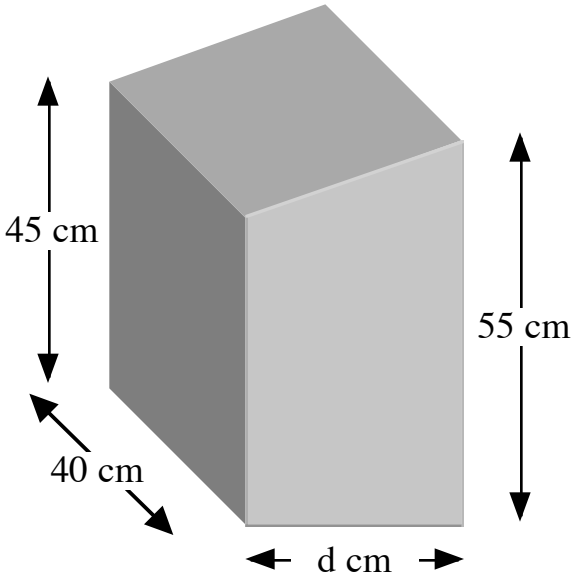
volume 132000 cm^3

(19)



volume 180000 cm^3

(20)



volume 70000 cm^3

ANSWERS

(1) (a) 700 cm^2 (b) 21 000 cm^3

(2) (a) 2100 cm^2 (b) 105 000 cm^3

(3) (a) 600 cm^2 (b) 21 000 cm^3

(4) (a) 1100 cm^2 (b) 22 000 cm^3

(5) (a) 1 800 cm^2 (b) 72 000 cm^3

(6) (a) 2 400 cm^2 (b) 96 000 cm^3

(7) (a) 4 500 cm^2 (b) 315 000 cm^3

(8) (a) 560 cm^2 (b) 16 800 cm^3

(9) (a) 4 800 cm^2 (b) 384 000 cm^3

(10) (a) 1 860 cm^2 (b) 93 000 cm^3

(11) (a) 706·858... cm^2 (b) 56548·667... cm^3

(12) (a) 157·079... cm^2 (b) 9424·777... cm^3

(13) (a) 28·274... cm^2 (b) 848·230... cm^3

(14) (a) 461·814... cm^2 (b) 1847·256... cm^3

(15) (a) 2613·716... cm^2 (b) 104548·667... cm^3

(16) (a) 4201·061... cm^2 (b) 210053·096... cm^3

(17) (a) 600 cm^2 (b) $d = 40$ cm

(18) (a) 2 640 cm^2 (b) $d = 12$ cm

(19) (a) 3 600 cm^2 (b) $d = 60$ cm

(20) (a) 1 750 cm^2 (b) $d = 35$ cm