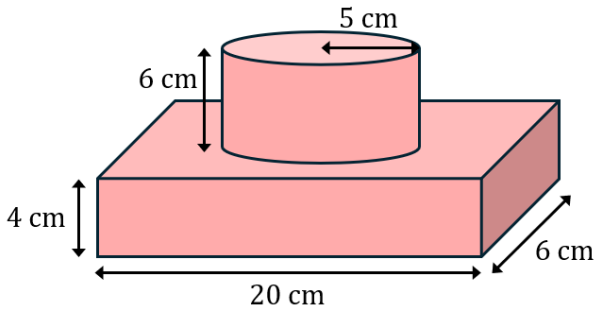
Volume and Surface Area of Compound Curved Shapes

(a)

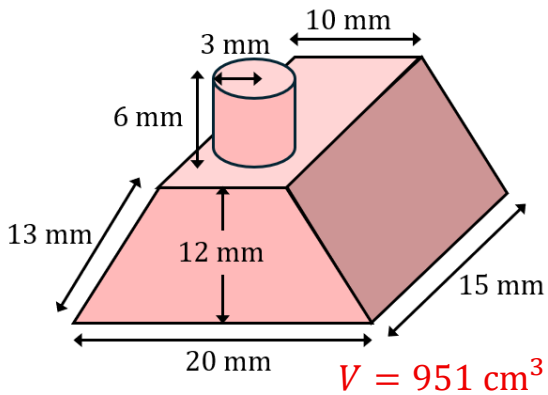
Find the volume and surface area of the compound shape.



$V = 951 \text{ cm}^3$
$SA = 12516 \text{ cm}^2$

(b)

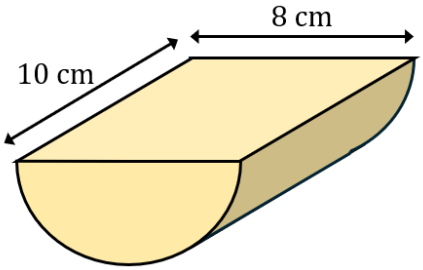
Find the volume and surface area of the compound shape.



$V = 951 \text{ cm}^3$
$SA = 12516 \text{ cm}^2$

(c)

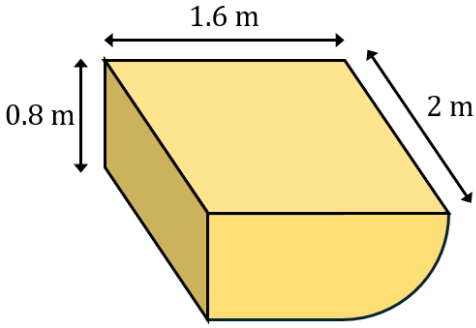
Find the volume and surface area of the semi-cylinder shown.



$V = 80\pi$ or 251 cm^3
$SA = 256 \text{ cm}^2$

(d)

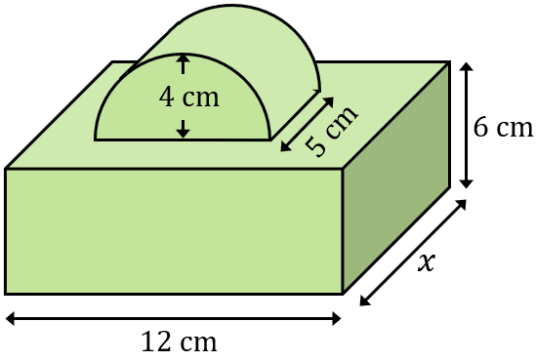
Find the volume and surface area of the compound shape shown.



$V = 2.29 \text{ m}^3$
$SA = 8.91 \text{ m}^2$

(e)

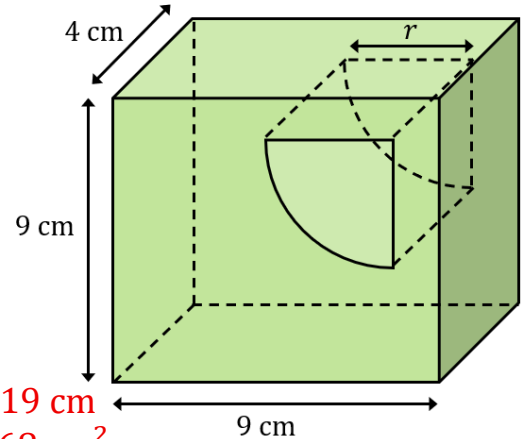
The volume of the compound shape is 630 cm^3. Find the missing length x and the total surface area of the shape.



$L = 7 \text{ cm}$
$SA = 469 \text{ cm}^2$

(f)

A quarter cylinder is cut from a cuboid. The volume of the resulting shape is 292 cm^3. Find the radius r and the total surface area of the shape.



$r = 3.19 \text{ cm}$
$SA = 368 \text{ cm}^2$