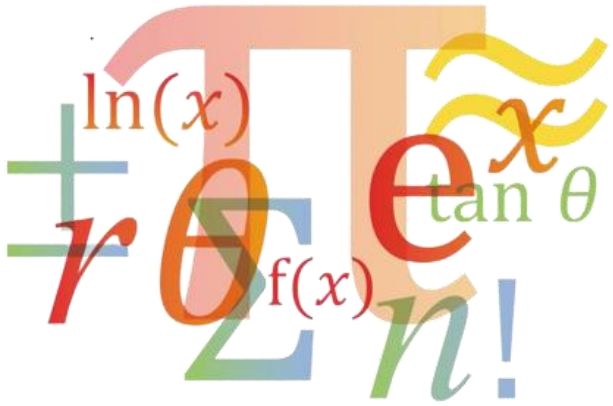
Cambridge Assessment International Education

Checkpoint 2

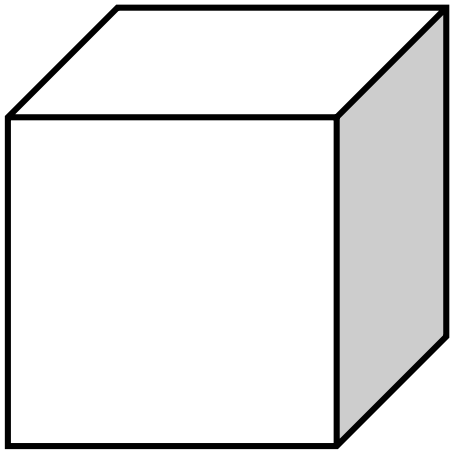
Chapter 25:

Cube ,Cuboid and Prism

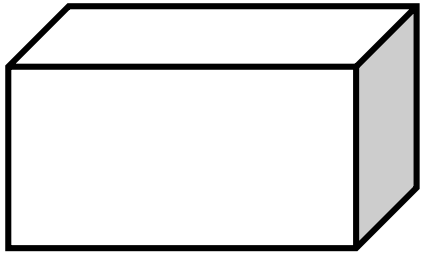


3D shapes

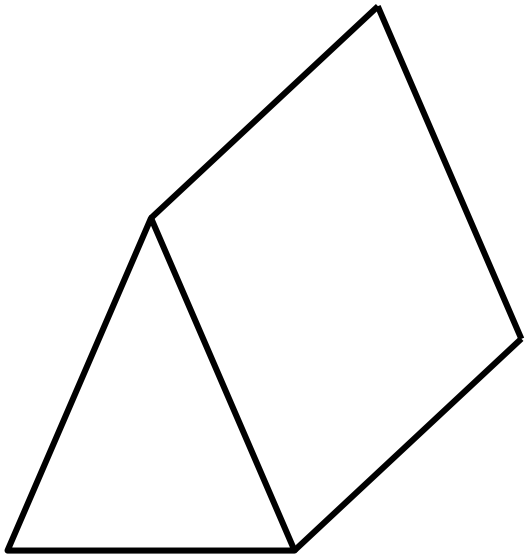
A prism is a 3D shape that has a constant cross-section.



CUBE



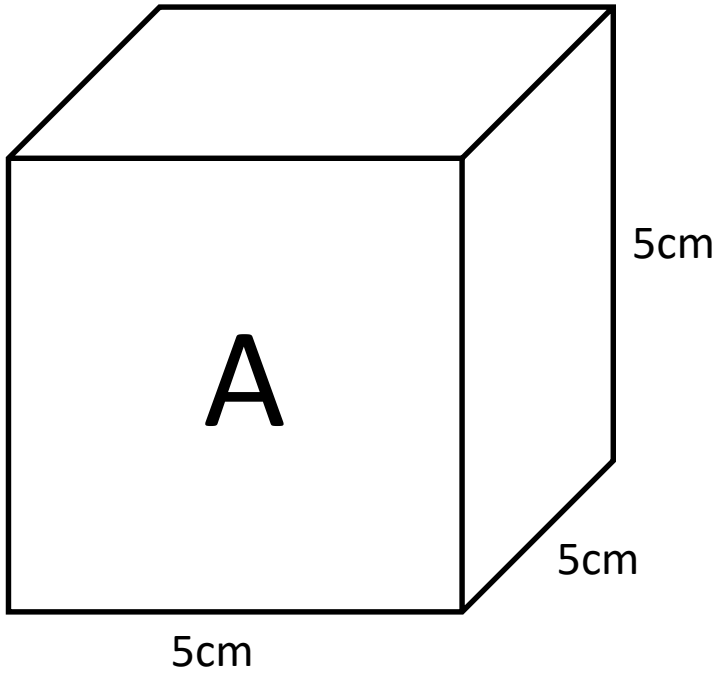
CUBOID



TRIANGULAR PRISM

Surface Area

Surface area is the total area of the outside of a 3D object

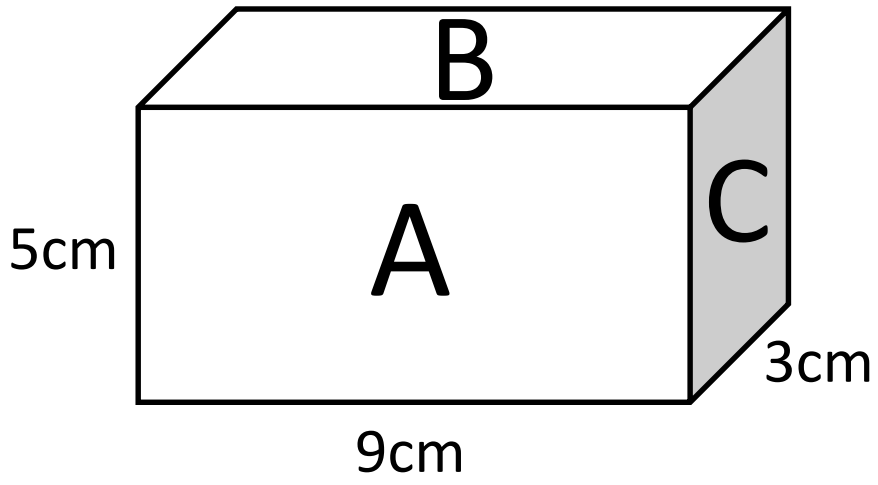


Each face is the same – a square.

Area A = 5 x 5
= 25cm^2

Total Surface Area = 6 x 25
= 150cm^2

Surface Area



Area A = 5 x 9
= 45cm^2

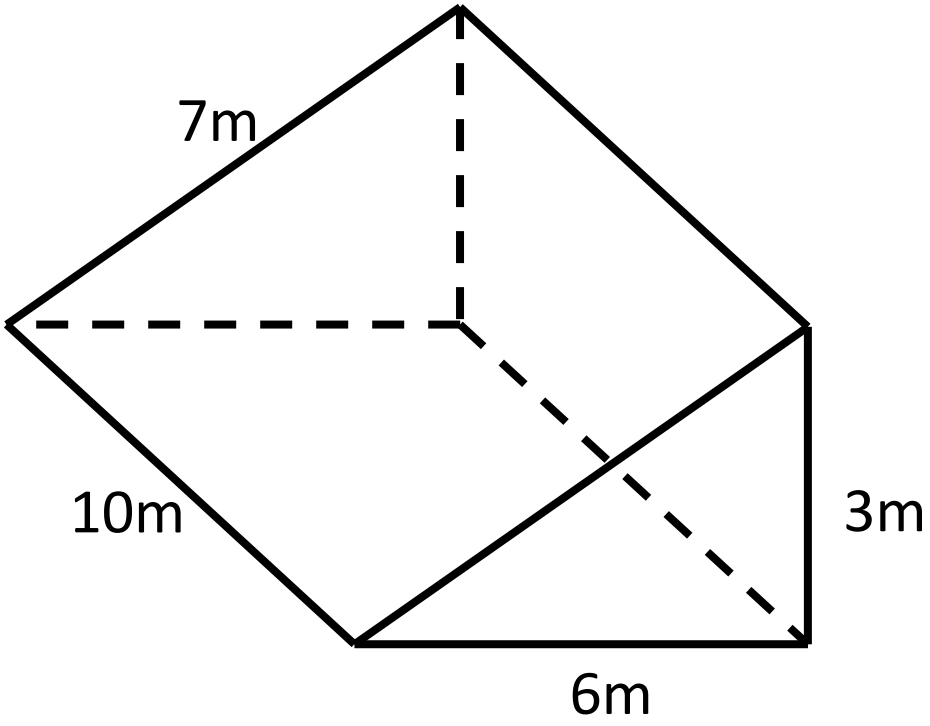
Area B = 9 x 3
= 27cm^2

Area C = 3 x 5
= 15cm^2

Total Surface Area
= (45 + 27 + 15) x 2

= 174cm^2

Surface Area



Area of Triangles = ½ x 3 x 6

= $9m^2$

= 9 x 2

= $18m^2$

Area of Rectangle 1 = 10 x 6

= $60m^2$

Area of Rectangle 2 = 7 x 10

= $70m^2$

Area of Rectangle 3 = 3 x 10

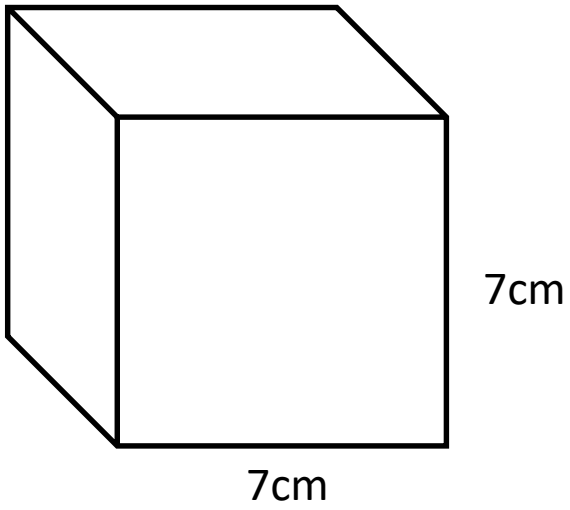
= $30m^2$

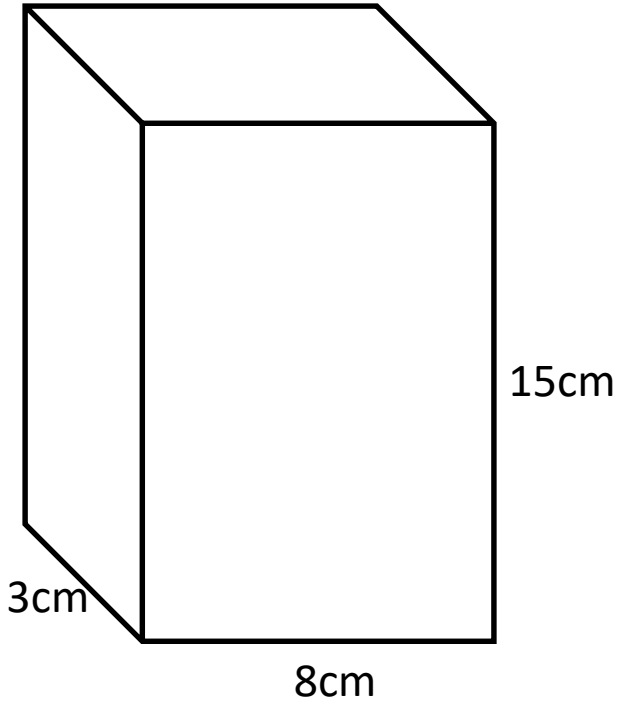
Total Surface Area = 18+ 60 + 70 + 30

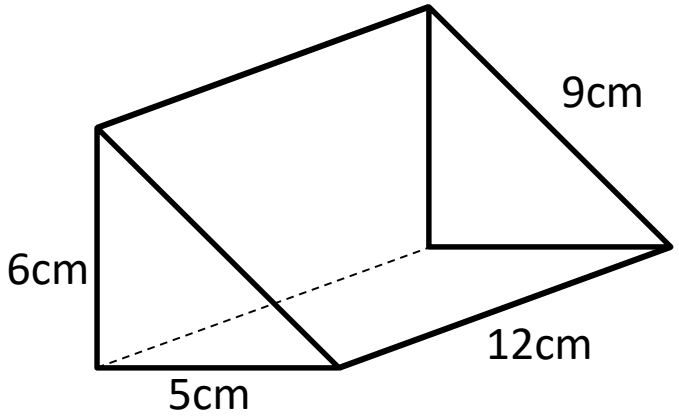
= $178m^2$

Surface Area

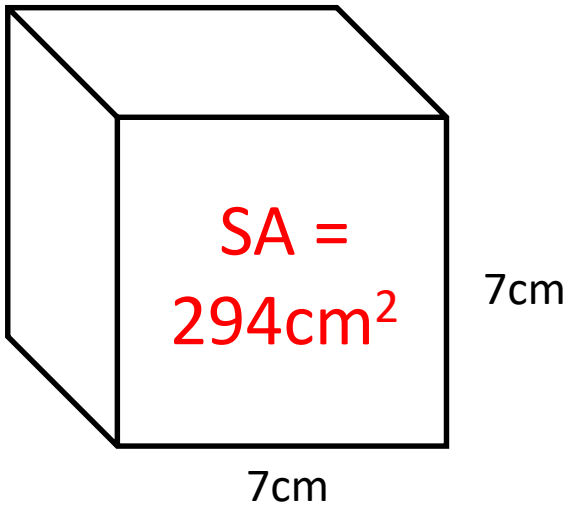
Calculate the Surface Area of the shapes below:



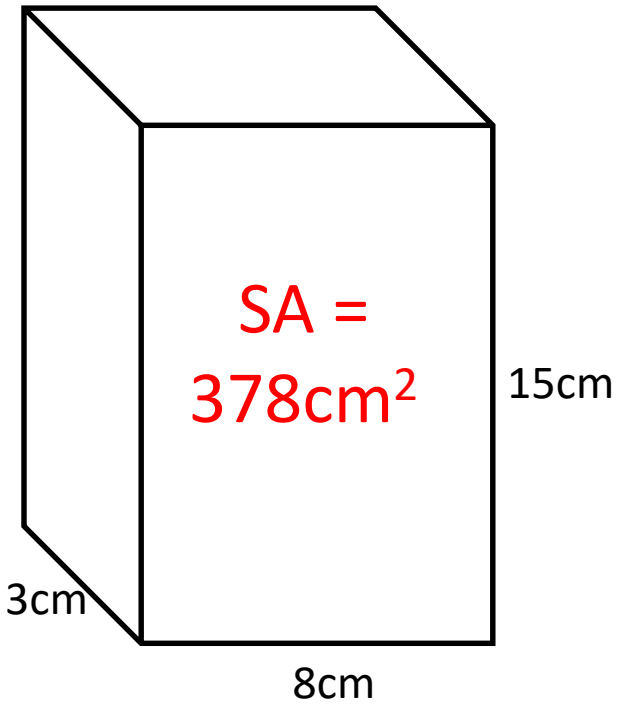




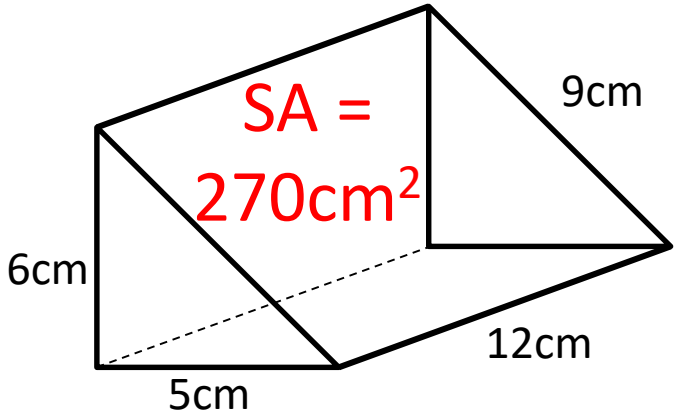
Surface Area



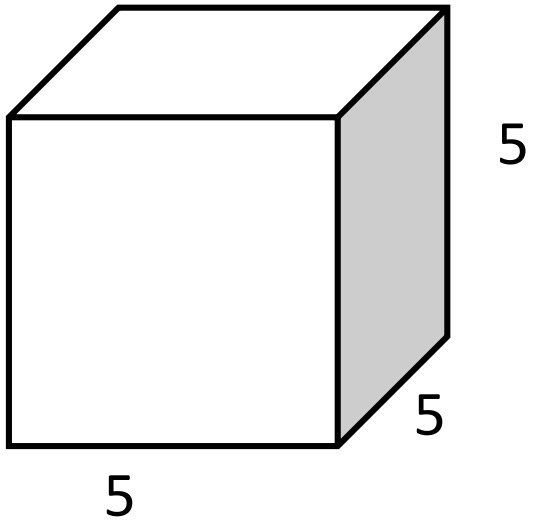
Surface Area



Surface Area



Volume of Cube



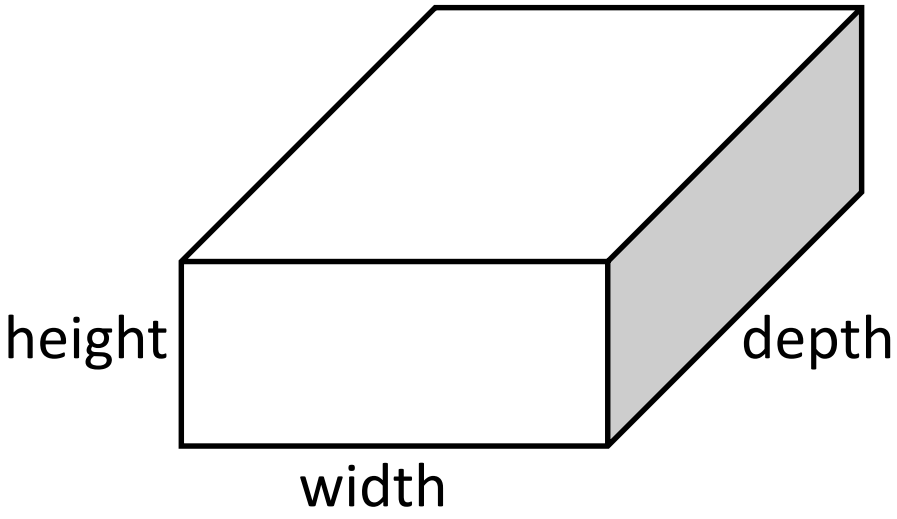
Volume = $a \times a \times a$

V = 5 x 5x 5

V = $\underline{125\text{cm}^3}$

Volume of Cuboids

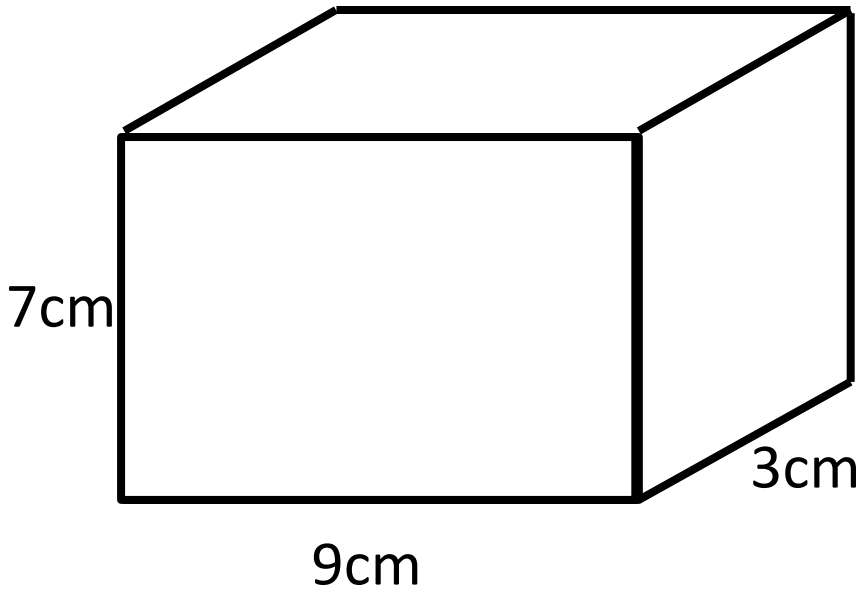
A cuboid is a 3-dimensional object made up of a rectangles and squares



Volume = height x width x depth

Units: cm^3, m^3, mm^3, km^3, etc

Volume of Cuboid

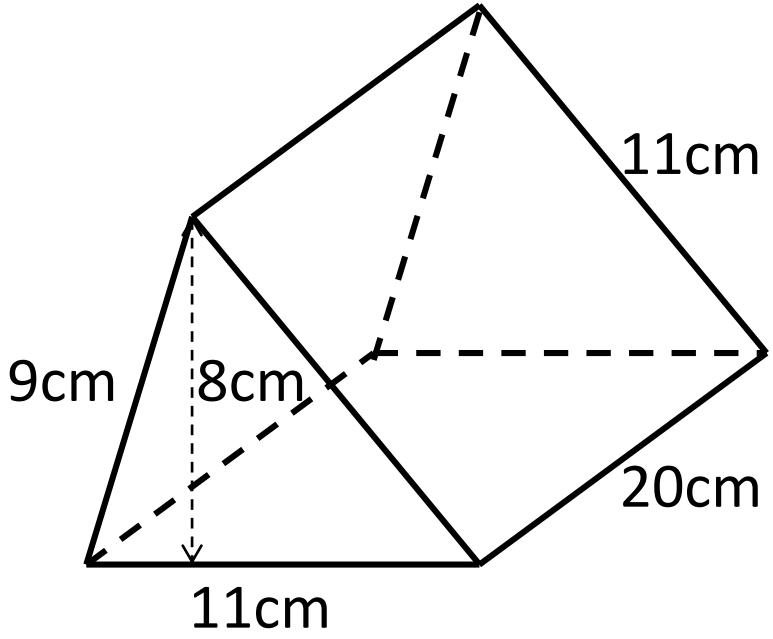


Volume = $a \times b \times c$

V = 7 x 9 x 3

V = <u>189cm^3</u>

Volume of Prisms



Volume = Area of cross-section x depth

Area of cross section
= (11 x 8) ÷ 2
= 44cm^2

Volume = 44 x 20

= <u>880cm^3</u>