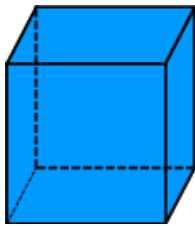# Surface Area of Right Rectangular Prisms
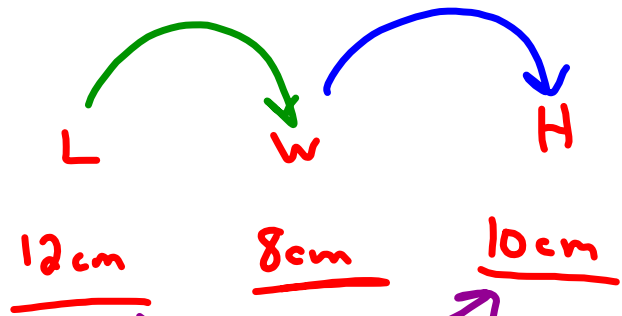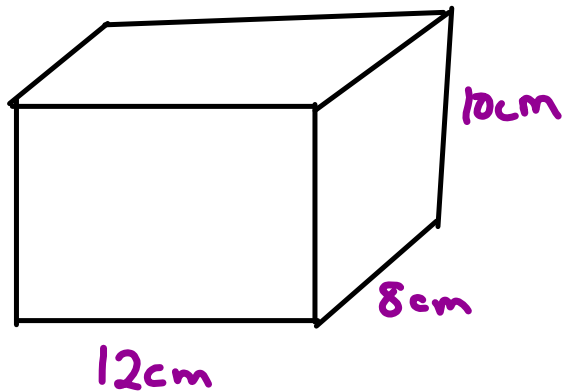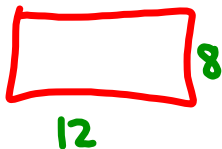
Surface Area is the sum of the area of all the faces of a 3D object.

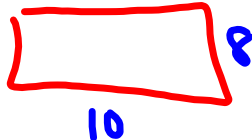Square units (for example: m^2, cm^2) are used to measure area and surface area and MUST be included!

10cm

8cm

12cm

L　　　W　　　H

12cm　　　8cm　　　10cm

Top / Bottom

8

12

$$A = L \times W$$
$$= 12cm \times 8cm$$
$$= 96cm^2$$

× 2 faces
(Top / Both)

192 cm²

L / R

8

10

$$A = L \times W$$
$$= 10cm \times 8cm$$
$$= 80cm^2$$

× 2 faces (L/R)

160cm²

Front / Back

10cm

12cm

$$A = L \times W$$
$$= 12cm \times 10cm$$
$$= 120cm^2$$

× 2 faces (Fr/Bk)

240 cm²

Total SA = 192cm² + 160 cm² + 240cm²

= 592 cm²

You Try
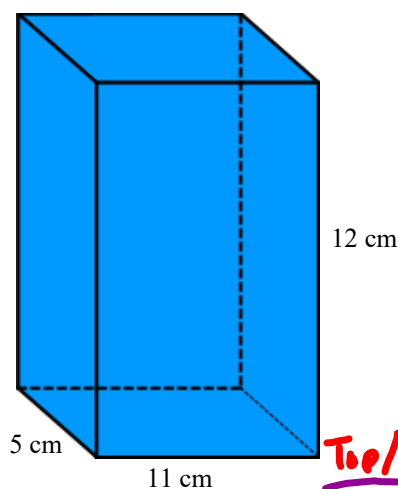
5cm, 11cm, 12cm

Top/Bott

$A = L \times W$
$= 11 \times 5$
$= 55 \text{ cm}^2$

$\times 2$

110 cm^2

L/R

$A = L \times W$
$= 11 \times 12$
$= 132 \text{ cm}^2$

$\times 2$

264 cm^2

Front/Back

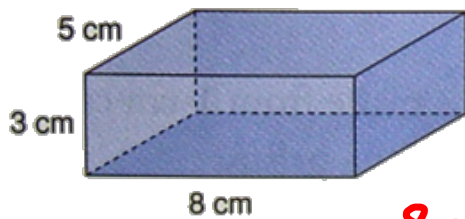$A = L \times W$
$= 12 \times 5$
$= 60 \text{ cm}^2$

$\times 2$

120 cm^2

Total SA $= 110 \text{ cm}^2 + 264 \text{ cm}^2 + 120 \text{ cm}^2$

$= 494 \text{ cm}^2$

L   W   H
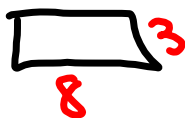
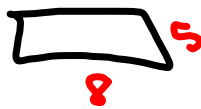H

W

L

What is the surface area of this prism?
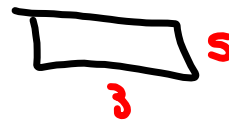
5 cm

3 cm

8 cm

8cm   3cm   5 cm

Top/Bott   **L/R**   **Fr /Back**

3   5   5

8   8   3

$A = L \times W$ $A = L \times W$ $A = L \times W$

$= 8 \times 3$ $= 8 \times 5$ $= 3 \times 5$

$= 24 cm^2$ $= 40 cm^2$ $= 15 cm^2$

$\times 2$ $\times 2$ $\times 2$

$48 cm^2$ $80 cm^2$ $30 cm^2$

Total SA $= 48 cm^2 + 80 cm^2 + 30 cm^2$

$= 158 cm^2$

Practice Questions

Page 186 #4, #5, #6, 7

Attachments

Review of Surface area of 2D Shape Grade 8 Unit 4 PDF.pdf