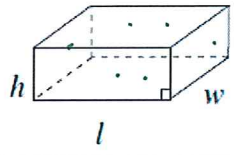
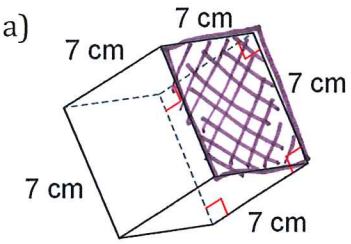
3.2 Surface Areas of Prisms and Pyramids – Part 1

The **surface area** of a 3-dimensional figure is the total area of its surface. Since the **faces** of a 3D figure are made up of the basic shapes we looked at in 3.1, all we have to do is find the area of these faces and add (sum) them together.

3D Figure	Surface Area	What shapes are the faces?
Rectangular Prism 	SA = sum of areas of all faces	6 Rectangles (3 different Pairs) 1) Right & left sides 2) Top & Bottom 3) Front & Back

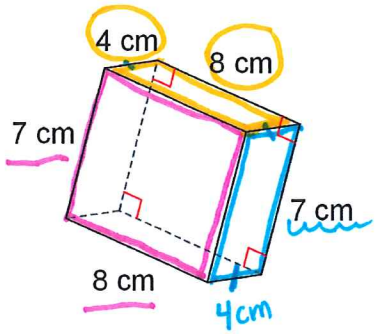
Examples

Ex 1. Find the surface area of each of the following.

a) 

$SA = 6 \times l \times w$
$= 6 \times (7 \times 7)$
$= 294\ cm^2$

cube! (6 matching sides)

b) 

Rectangular Prism

Front/Back: $(7 \times 8) \times 2 = 112\ cm^2$
+
Right/left (sides): $(7 \times 4) \times 2 = 56\ cm^2$
+
Top/Bottom: $(4 \times 8) \times 2 = 64\ cm^2$

Surface Area $= 232\ cm^2$