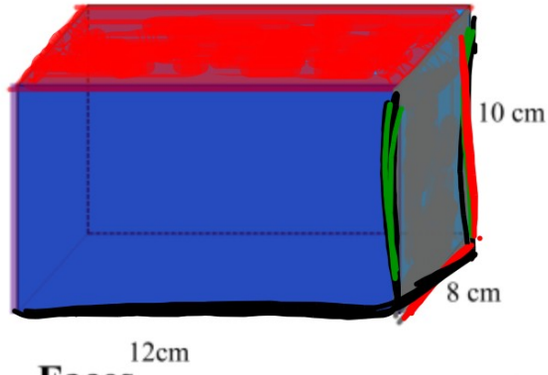
Surface Area

What is Surface Area?

Surface area is the total area of all of the faces of the object.
To find surface area:
1. **Draw all of the faces (or you can draw a net).**
2. **Find the area of each face.**
3. **Then add up the areas of all of the faces.**

12, 8, 10



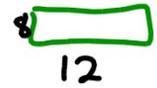
Front/Back

$A = L \times W$
$= 12 \times 10$
$= 120\,cm^2$
$\times 2$
$240\,cm^2$

Left/Right

$A = L \times W$
$= 8 \times 10$
$= 80\,cm^2$
$\times 2$
$160\,cm^2$

Top/Bottom

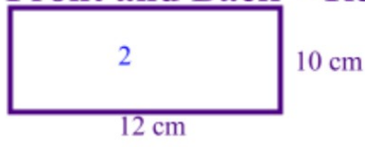


$A = L \times W$
$= 8 \times 12$
$= 96\,cm^2$
$\times 2$
$192\,cm^2$

$240 + 160 + 192$
$592\,cm^2$

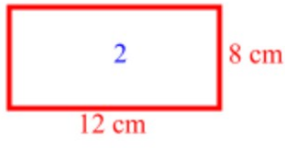
Faces

Front and Back - Rectangles



$A = l \times w$
$= 12 \times 10$
$= 120\ cm^2$

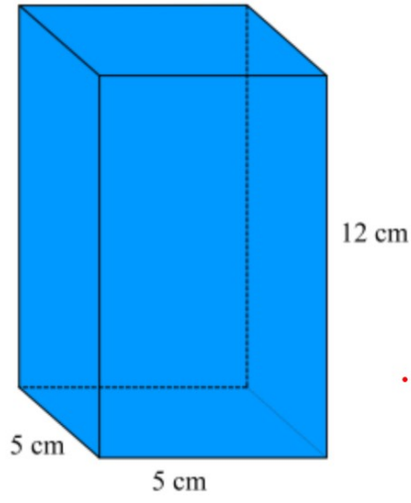
Top and Bottom - Rectangles



$A = l \times w$
$= 12 \times 8$
$= 96\ cm^2$

2 sides - Rectangles

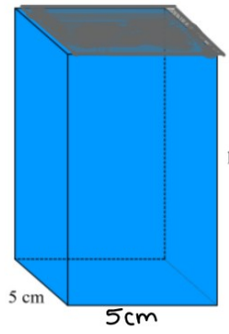
$A = l \times w$
$= 10 \times 8$
$= 80\ cm^2$



2 Front + 2 Top + 2 (side)

Surface Area $= 2 \times 120 + 2 \times 96 + 2 \times 80$
$= 240 + 192 + 160$
$= 592\ cm^2$

What is the surface area of this rectangular prism?



12 5 5

Fr/Back

L/R

Top / Bott

$A = l \times w$
$= 5 \times 12$
$= 60\ cm^2$
$\times 2$
$120\ cm^2$

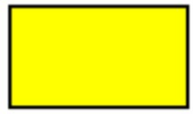
$A = l \times w$
$= 5 \times 12$
$= 60\ cm^2$
$\times 2$
$120\ cm^2$

$+ \quad 290\ cm^2$

$A = l \times w$
$= 5 \times 5$
$= 25\ cm^2$
$\times 2$
$50\ cm^2$

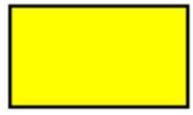
Top and Bottom

Area $= l \times w$
$= 5 \times 5$
$= 25\ cm^2$

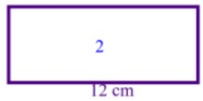


Front and Back

Area = l x w
= 12 x 5
= 60 cm²



Sides



Area = l x w
= 12 x 5
= 60 cm²

5 cm

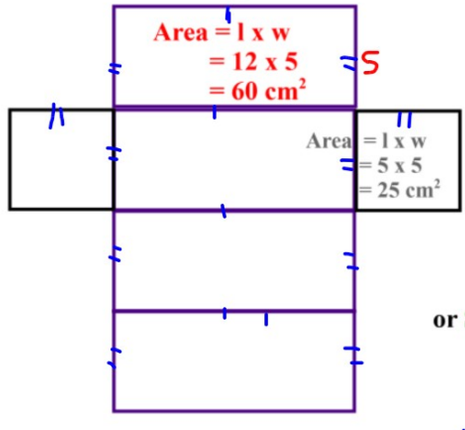
What do you notice about the front and back and 2 sides?

Then you could have said you have 4 rectangles that are the same and multuiply by 4.

Surface Area = 2 x 25 + 2 x 60 + 2 x 60
= 50 + 120 + 120
= 290 cm²

or SA = 2 x 25 + 4 x 60
= 50 + 240
= 290 cm²

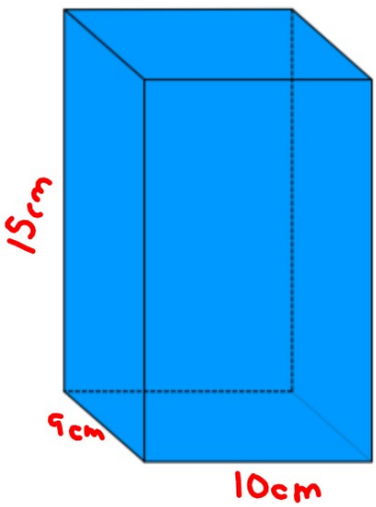
12



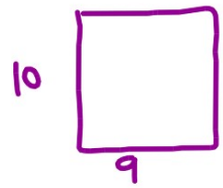
or SA = 2 x 25 + 4 x 60
= 50 + 240
= 290 cm²

~~Homework pg. 186 # 4-7~~

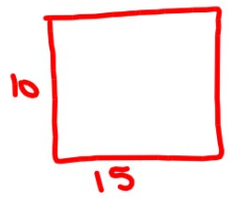
Homework
Pg 180 #3-5, 7, 11
Pg 186 # 4, 5, 6



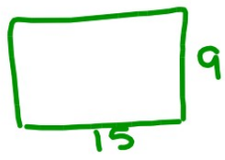
10 15 9



A = LxW
= 10x9
= 90
x2
180

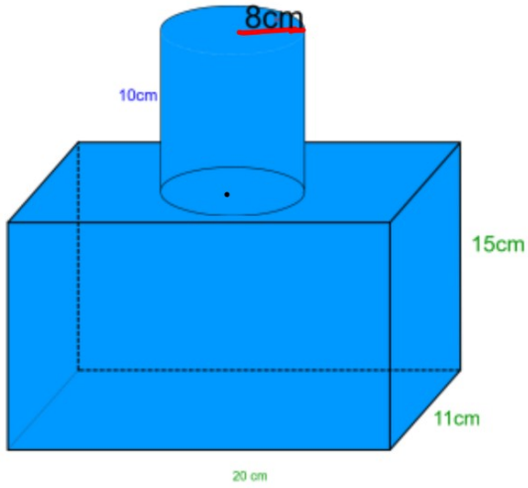


A = LxW
= 10x15
= 150
x 2
+ 300



A = LxW
= 15x9
= 135
x 2
+ 270

750 cm^2



gr 9 concept