



<http://jmh.nbed.nb.ca/>



Text book link:

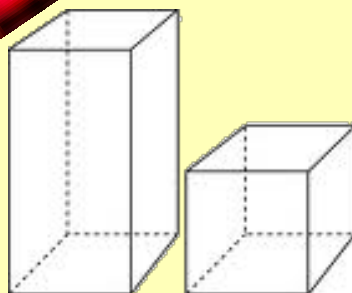
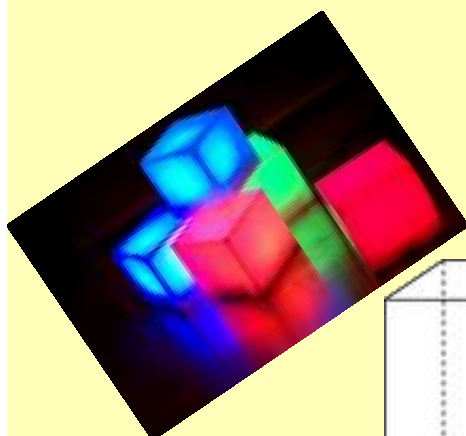
<http://www.mathmakessense.ca/>



- click on web books "login"
- click on "Math Makes Sense 9"
- user name: [jameshill_student](#)
- password: [student2010](#)

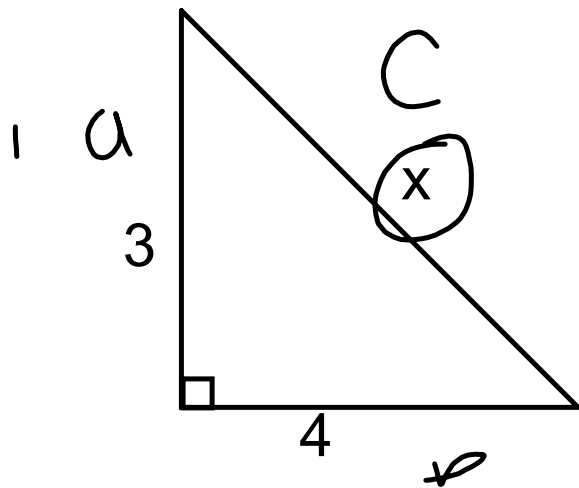
Intro to High School Math

Section 1.3: Surface Area of Objects Made from Right Rectangular Prisms



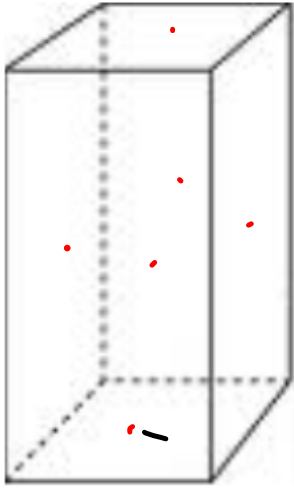
Problem of the Day

Using Pythagorean theorem find the missing side (x) of this triangle. Nov 12/14

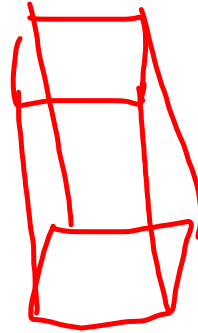


$$\begin{aligned}c^2 &= a^2 + b^2 \\c^2 &= 3^2 + 4^2 \\c^2 &= 3^2 + 4^2 \\c^2 &= 9 + 16 \\c^2 &= \sqrt{25} \\c &= 5\end{aligned}$$

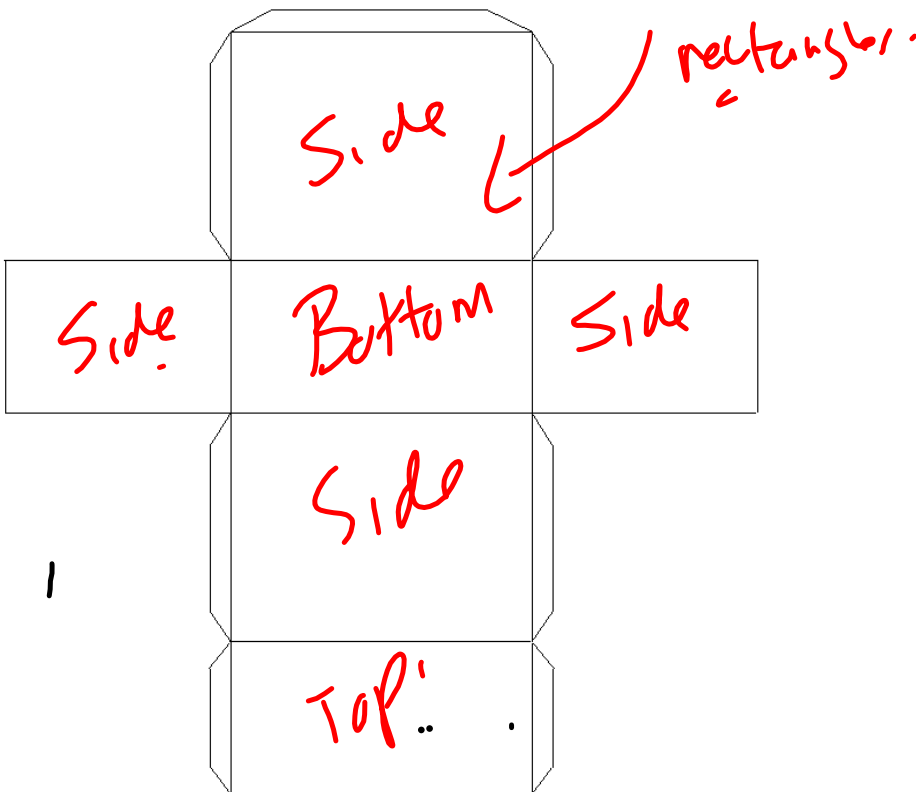
Rectangular Prism (3D)



Surfaces.
Number of Faces: 6

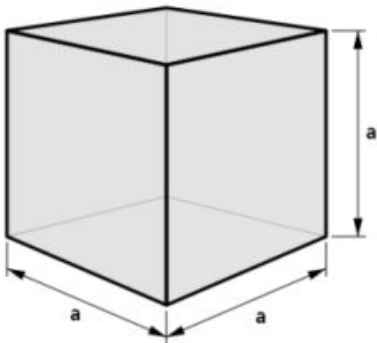


Rectangular Prism



~

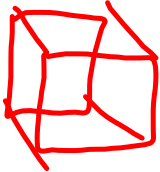
Cubes



Surfaces.

Number of Faces:

6



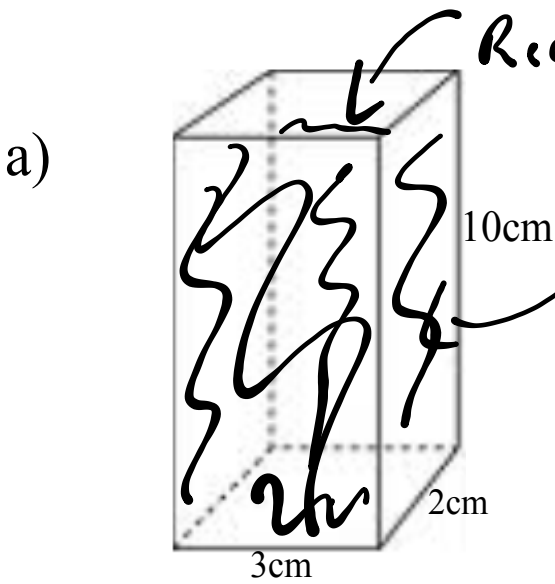
Surface Area

? what I get when I add.

The surface area is the sum of all the areas of all the "shapes that cover the surface" of the object.

Faces

Find the Surface Area of The Rectangular Prism



Think in Pairs

Front = Back

Top = Bottom

Side = Side

A = rectangle

$$A = l \times w$$

$$b \times h \quad 30 \times 2 = 60$$

① $(3 \times 10) \times 2 = 12$

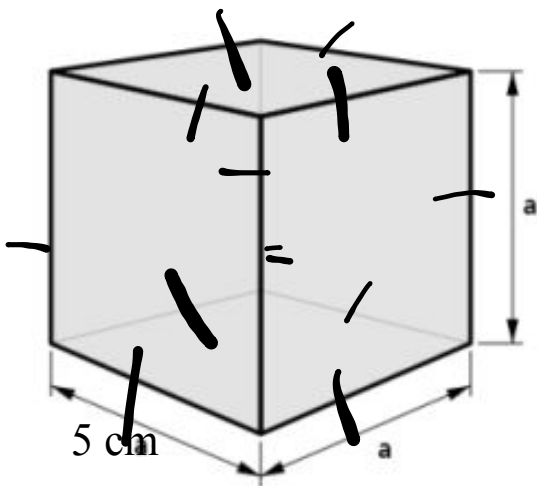
② $(3 \times 2) \times 2 = 12$

③ $(10 \times 2) \times 2 = 40$

$20 \times 2 = 40$

$A = 112 \text{ cm}^2$

Find the Surface Area of the Following Cube:



$$A = l \times w \quad \text{of one square.}$$

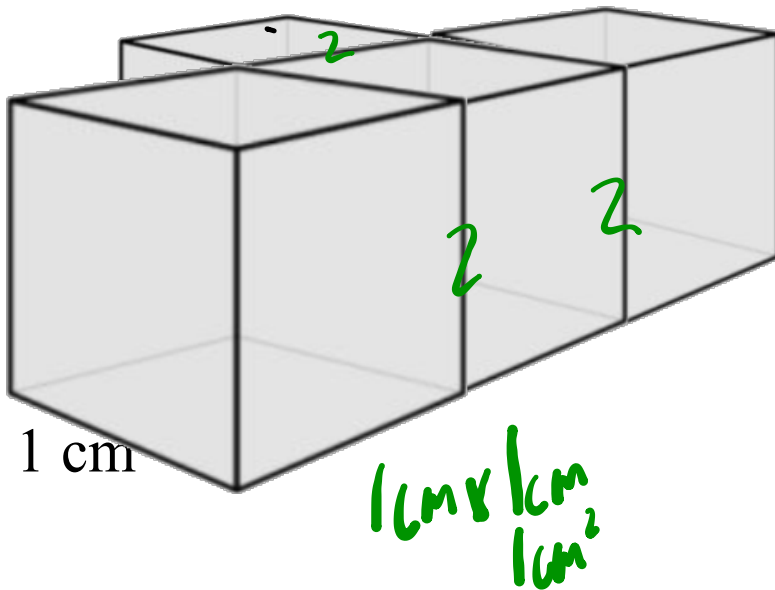
$$b \times h$$

$$A = (5 \times 5) = 25 \text{ cm}^2$$

$$A_{\text{cube}} = 25 \text{ cm}^2 \times 6$$

$$A_{\text{cube}} = 150 \text{ cm}^2$$

Find the Surface Area of the Connected Cubes



$$4 \times 6 \text{ or } 6 + 6 + 6 + 6 = 24$$

$$24 - (2 \times 3) =$$

$$24 - (2 + 2 + 2) \text{ or } 24 - 6 = 18 \text{ cm}^2$$

Method 1 (Think Individually about each shape)

4 cubes connected

* each have 6 faces FIND THE AREA OF EACH FACE

BUT

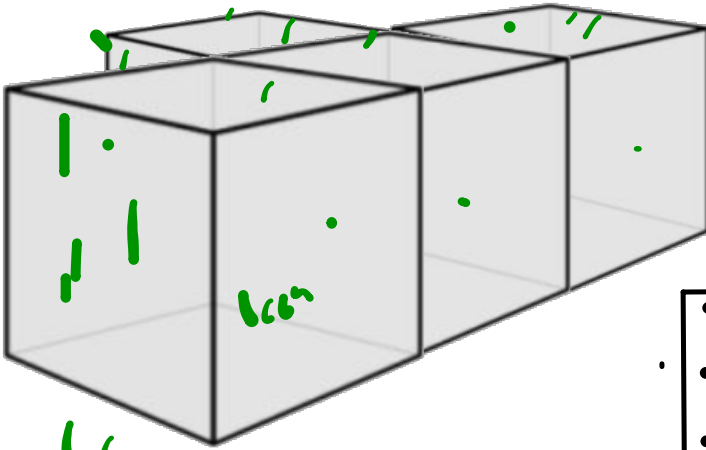
WHAT HAPPENS WHEN YOU JOIN FACES?

Do you have to count where they join in "surface area"? NO

With every connected cube 2 faces disappear

3 overlaps so 6 faces disappear

Method 2: (Visualize the top/bottom, front/back, side/side)



How many faces do we see on the top?

How many faces do we see on the bottom?

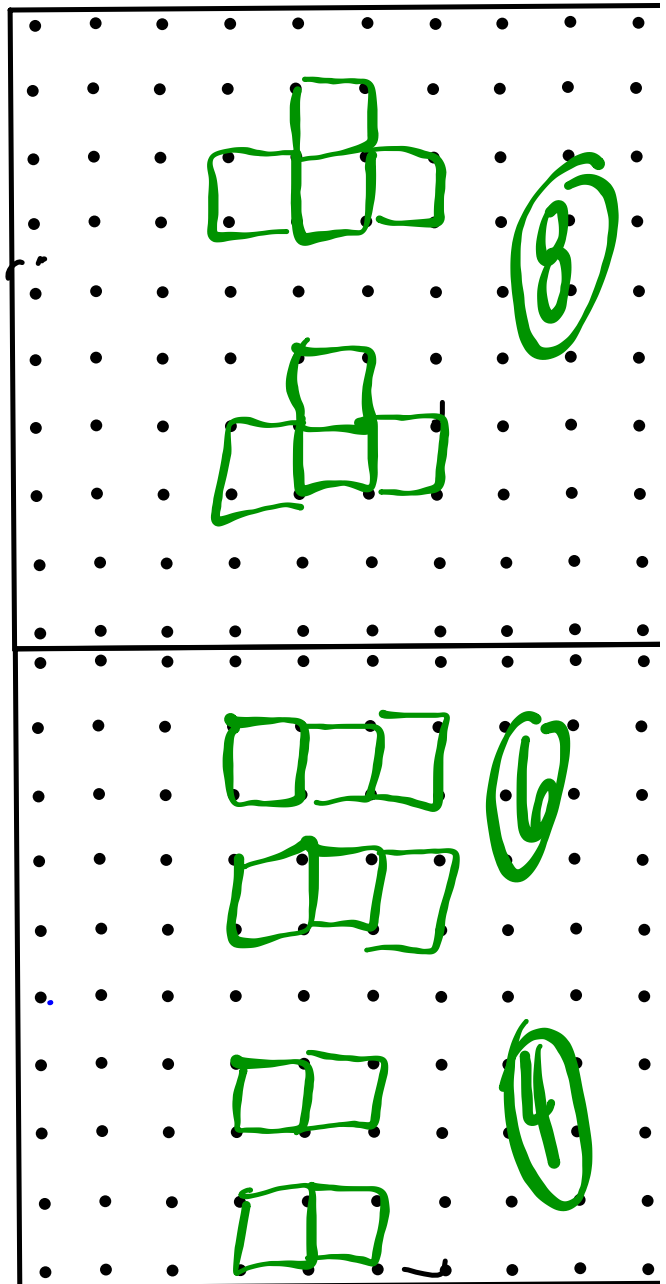
18 cm^2

How many faces do we see on the front?

How many faces do we see on the back?

How many faces do we see on the left side?

How many faces do we see on the right side?





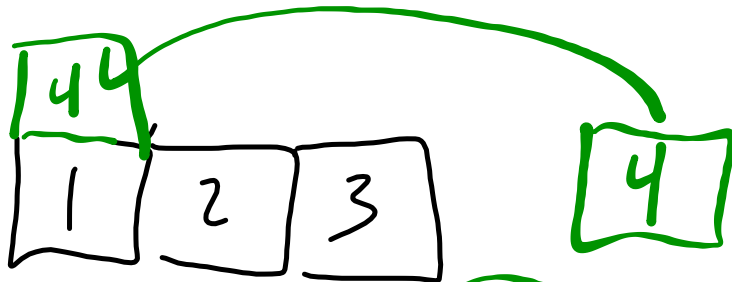
page 30 & 31

questions

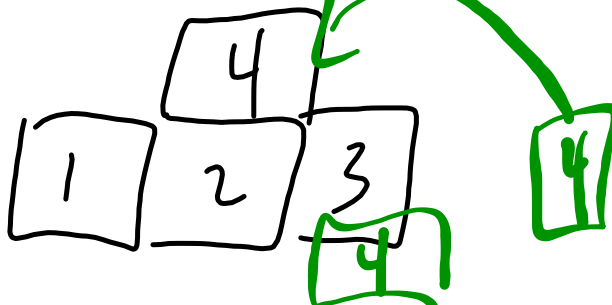
4 to 7

4-6.

5)



6)

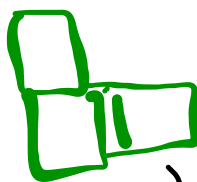


⑥ Similar.

(1)



g/).

1 cm²

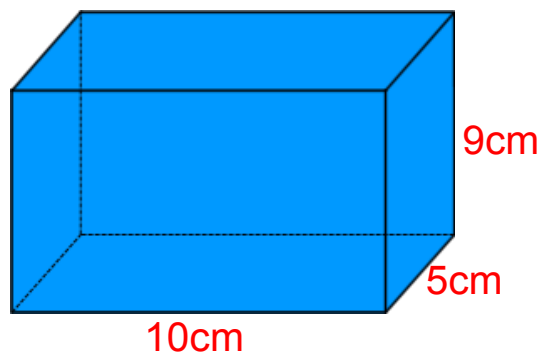
$$a) (3 \times 6) - (2 \times 2)$$

$$(6 + 6 \times 6) - (2 + 2)$$

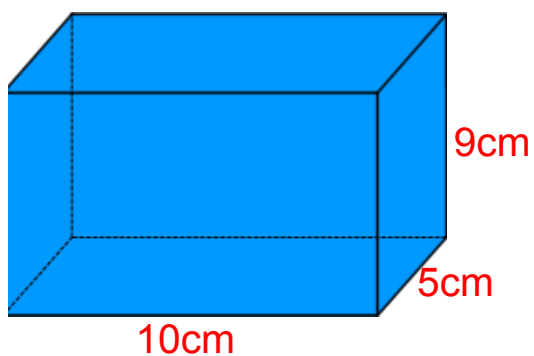
$$18 - 4$$

$$= 14 \text{ cm}^2$$

Find the surface area.



Find the surface area.



Top / Bottom

$$A=lw$$
$$A=10 \times 5$$
$$A=50$$

$$50 \times 2 = 100$$

Front / Back

$$A=lw$$
$$A=10 \times 9$$
$$A=90$$

$$90 \times 2 = 180$$

Side / Side

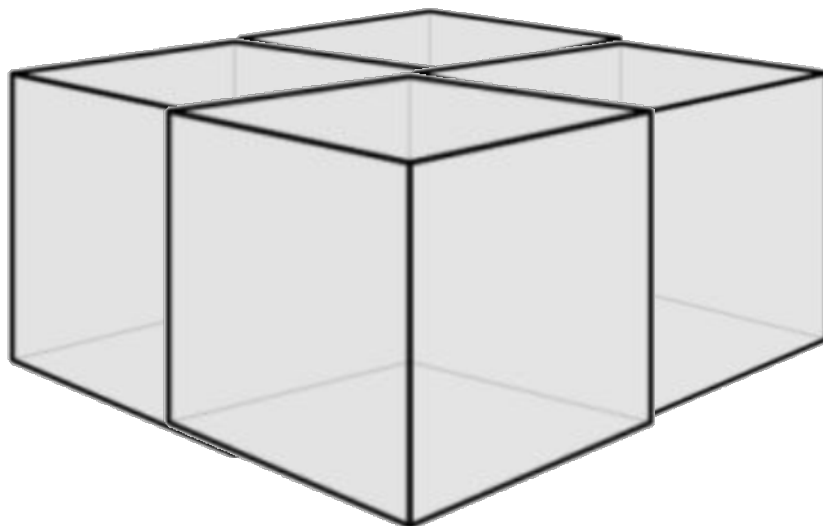
$$A=lw$$
$$A=9 \times 5$$
$$A=45$$

$$45 \times 2 = 90$$

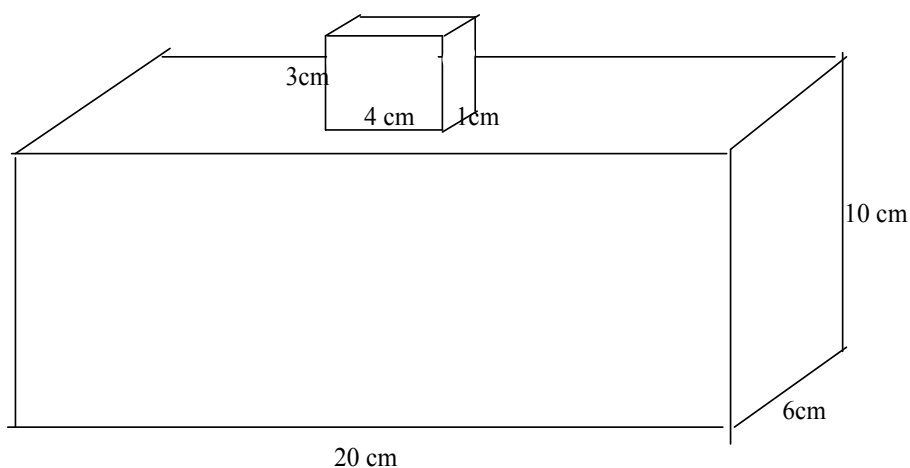
Total Surface Area

$$100 + 180 + 90$$
$$370 \text{cm}^2$$

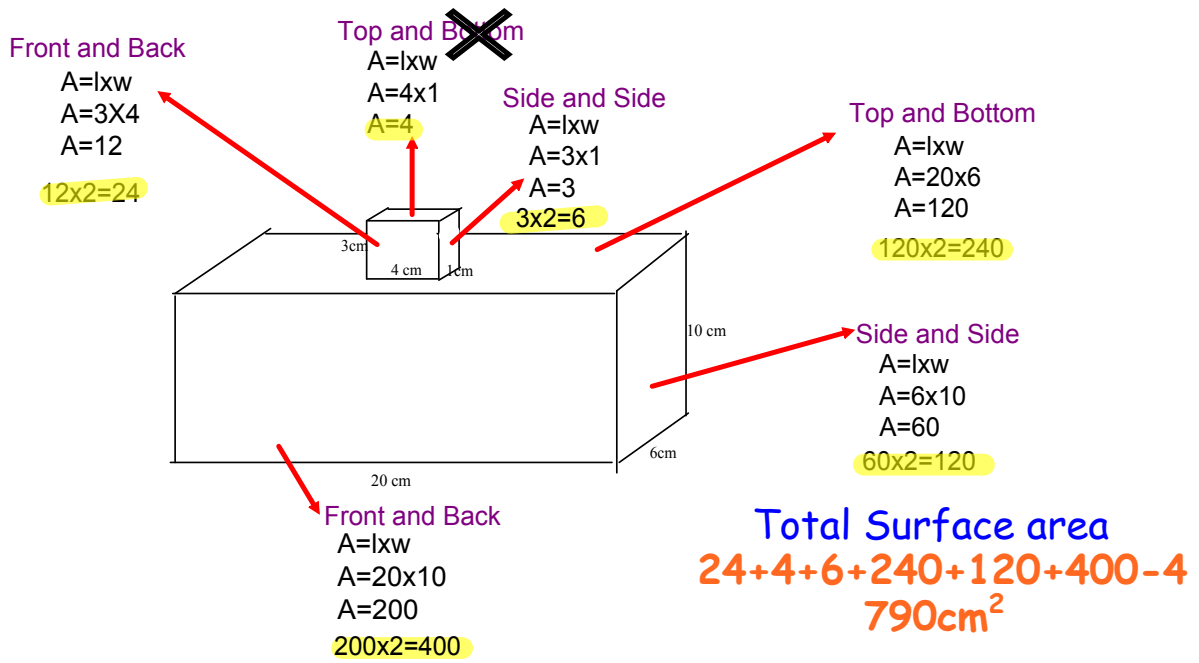
Find the Surface Area of This Composite Object.
Each cube has edge length of 2 cm.



Determine the surface area of the composite object.
Assume you can pick the object up, but you can't take it apart.
What effect does the overlap have on the calculation of the surface area?



Section_1.3_surface_are_of_prisms_&_connected.notebook

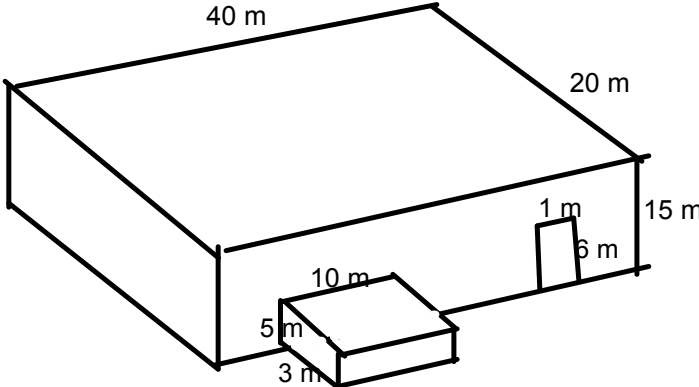


Find the area of the warehouse with the attached storage space.

You don't count the door!

(Think if you were going to paint this....How much paint is needed???)

Do you paint under the warehouse?





See Page 29
Example 3

Warehouse Question





Practice page 31

Questions: 8a, b, c

10

11

