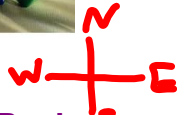
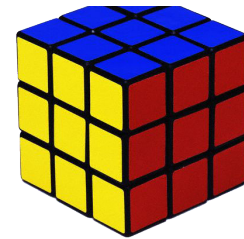




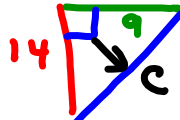
Warm Up Grade 8

$$c^2 = a^2 + b^2$$



Assessment Review

1. A ship travels for 14 km toward the south. It then changes direction and travels for 9 km toward the east. How far does the ship have to travel to return directly to its starting point?



$$c^2 = a^2 + b^2$$

$$c^2 = 9^2 + 14^2$$

$$c^2 = 81 + 196$$

2. Show work and answer.

a)  $\frac{3}{4} \div \frac{1}{4}$

Flip and multiply

$$\frac{3}{4} \times \frac{4}{1}$$

$$= \frac{12}{4} = \frac{6}{2} = \frac{3}{1}$$

$$= \frac{3}{1}$$

= 3

b)  $\sqrt{36} + \sqrt{25}$

$$6 + 5$$

$$c^2 = 277$$

$$\sqrt{c^2} = \sqrt{277}$$

$$c = 16.64 \text{ km}$$

Page 180 #1, 4, 5

Page 181 #6, 7

Page 182 #11

## Homework Solutions

1) A pyramid will have Triangles for faces and 1 base shape

A Prism will have 2 base shapes and rectangles for side faces

pg 180

- 3a) A is not a net since both circles are on the same side
- b) B is a net, it will form a cylinder

4. a) Right Triangular Prism

b) - make object

c) It has 2 triangle (right) faces and 3 rectangles

5. Net C → Triangular Pyramid  
(1st row - left) Faces  
4 triangles

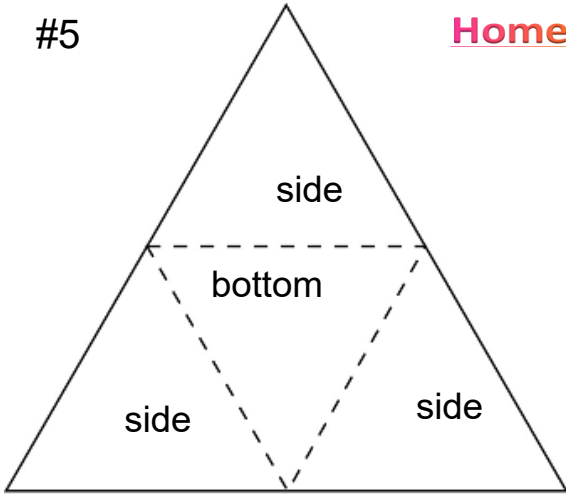
Net D → Triangular Prism  
(1st row middle) 2 triangles  
3 rectangles

Net E → Hexagonal Prism  
(1st row - right) 2 hexagons  
6 rectangles

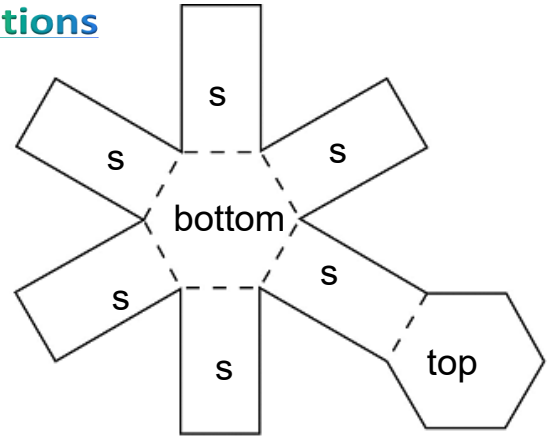
Net F → Cube with Square Pyramid  
on top  
(2nd row - left) 4 triangles  
5 squares

#5

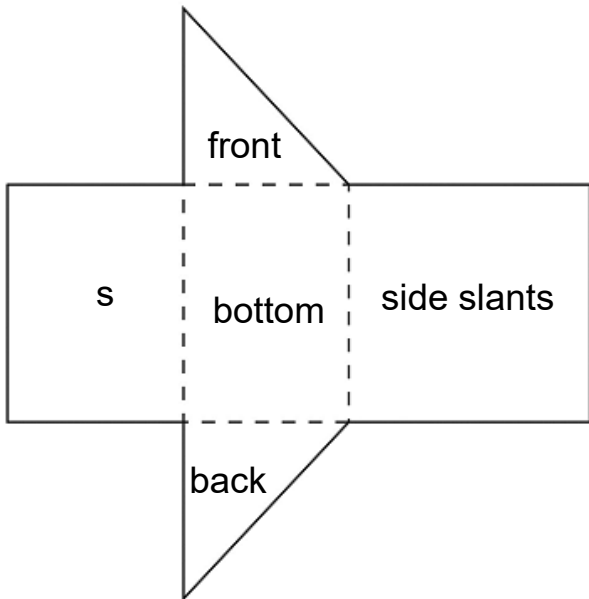
Homework Solutions



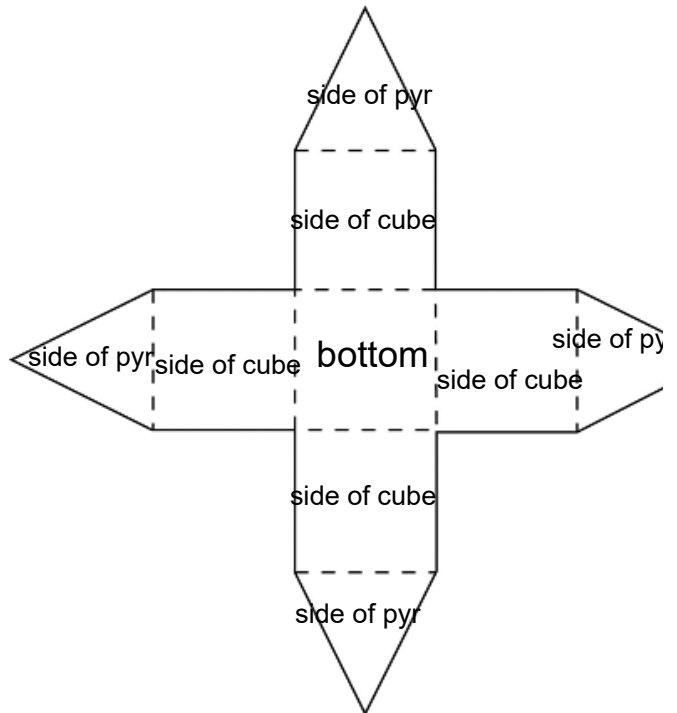
Net C



Net E

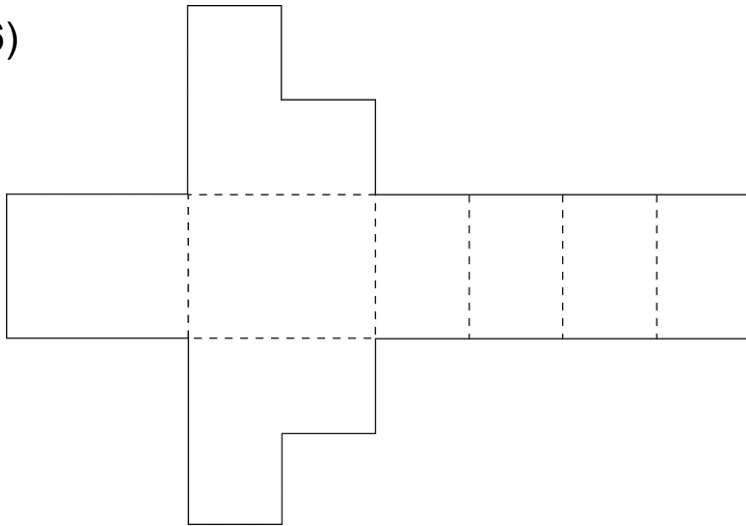


Net D



Net F

#6)

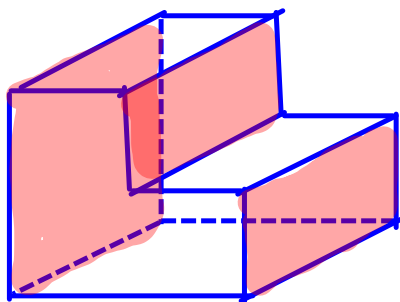
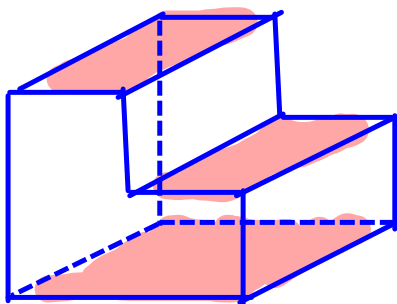


b. The object will look like a step

b) - net

c) Yes, it is a polyhedron. Its faces are polygon

d)



Parallel faces

Tops are ||

Bottoms are parallel

Sides are ||

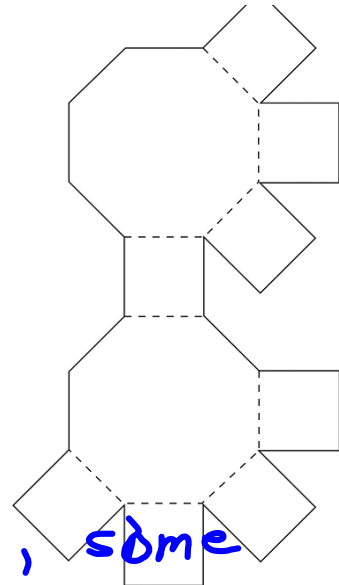
Perpendicular faces  
 → Top and front  
 → Side and Bottom

Page 180 #1, 4, 5

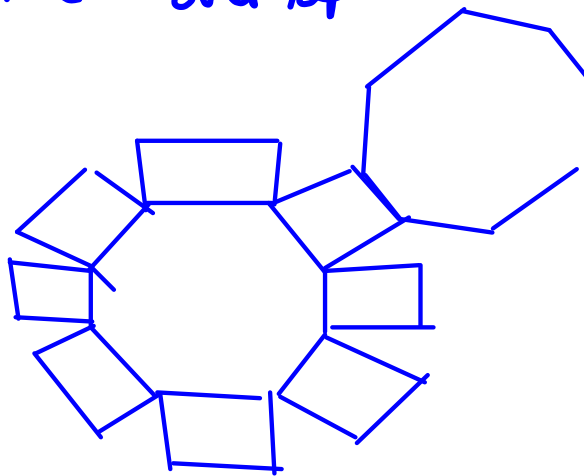
Page 181 #6, 7

Page 182 #11

#7)



7. No it is not a net, some of the sides overlap



8. The soccer ball is made of pentagons and hexagons

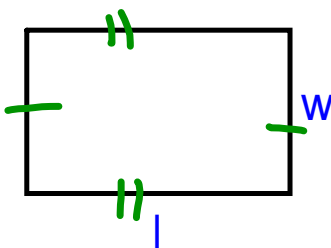
9. a) Is a net - Rectangular Pyramid  
 b) Yes - Triangular Prism  
 c) No  
 d) No

10. A is the net for the decagonal pyramid

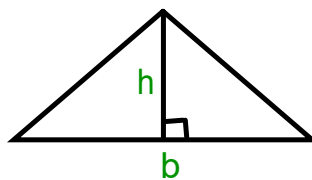
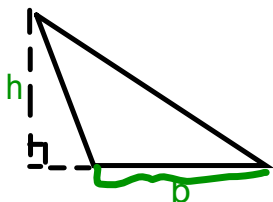
11. The following are nets of cubes  
 B, C, E, F, H, J

# Area of Polygons

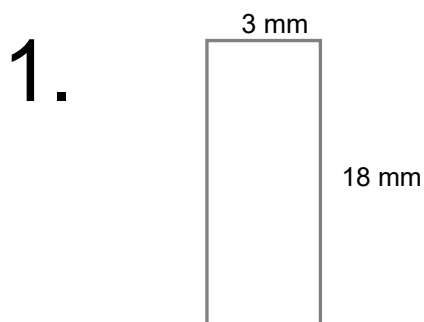
Area of a rectangle  $A = \text{length} \times \text{width}$  OR  $A = l \times w$



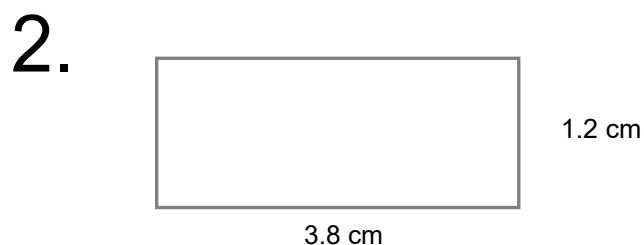
Area of a triangle  $A = \frac{\text{base} \times \text{height}}{2}$  OR  $A = \frac{b \times h}{2}$



Find the area of each rectangle.

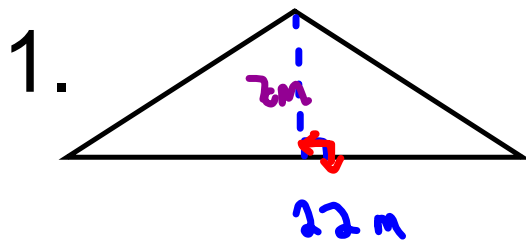


$$\begin{aligned} A_{\square} &= L \times W \\ &= 18\text{mm} \times 3\text{mm} \\ &= 54\text{mm}^2 \end{aligned}$$

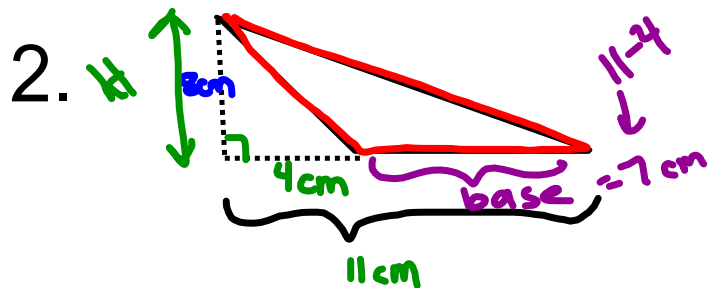


$$\begin{aligned} A_{\square} &= L \times W \\ &= 3.8\text{cm} \times 1.2\text{cm} \\ &= 4.56\text{cm}^2 \end{aligned}$$

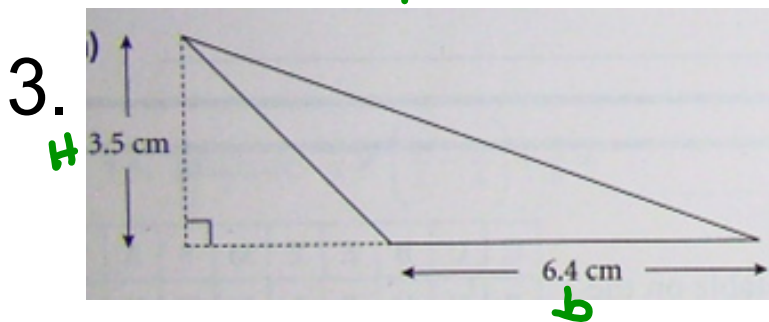
Find the area of each triangle.



$$\begin{aligned}
 A_{\Delta} &= \frac{b \times h}{2} \\
 &= \frac{22\text{m} \times 7\text{m}}{2} \\
 &= \frac{154\text{m}^2}{2} \\
 &= 77\text{m}^2
 \end{aligned}$$



$$\begin{aligned}
 A_{\Delta} &= \frac{b \times h}{2} \\
 &= \frac{7\text{cm} \times 8\text{cm}}{2} \\
 &= \frac{56\text{cm}^2}{2} \\
 &= 28\text{cm}^2
 \end{aligned}$$

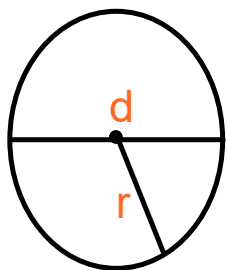


$$\begin{aligned}
 A_{\Delta} &= \frac{b \times h}{2} \\
 &= \frac{6.4\text{cm} \times 3.5\text{cm}}{2} \\
 &= \frac{22.4\text{cm}^2}{2} \\
 &= 11.2\text{cm}^2
 \end{aligned}$$



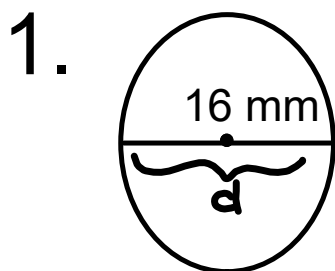
Area of a circle  $A = \pi \times \text{radius}^2$  OR  $A = \pi r^2$

$$A = 3.14 \times r \times r$$



$$r = \frac{d}{2}$$

Find the area of each circle.



$$d = 16 \text{ mm}$$

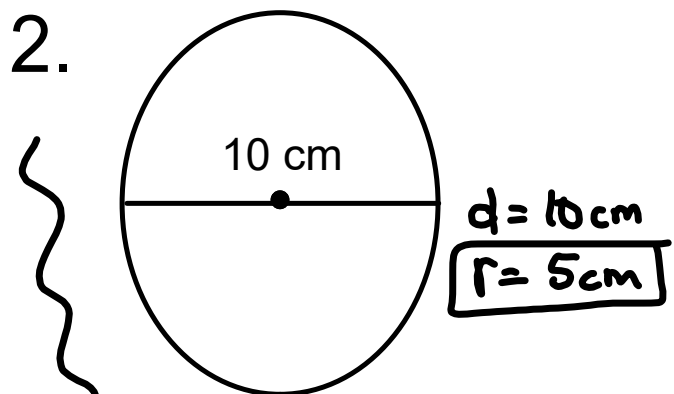
$$r = \frac{d}{2} = \frac{16}{2} = 8 \text{ mm}$$

$$r = 8 \text{ mm}$$

$$A_0 = \pi r^2$$

$$= 3.14 \times 8 \times 8$$

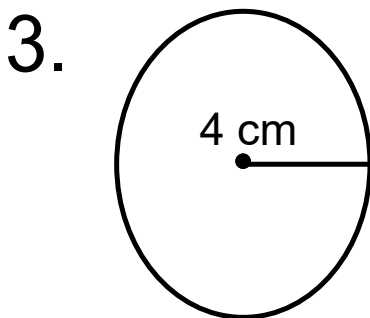
$$A_0 = 200.96 \text{ mm}^2$$



$$A_0 = \pi r^2$$

$$= 3.14 \times 5 \text{ cm} \times 5 \text{ cm}$$

$$= 78.5 \text{ cm}^2$$



$$r = 4 \text{ cm}$$

$$A_0 = \pi r^2$$

$$= 3.14 \times 4 \text{ cm} \times 4 \text{ cm}$$

$$= 50.24 \text{ cm}^2$$

# Class/Homework

Worksheet of REVIEW



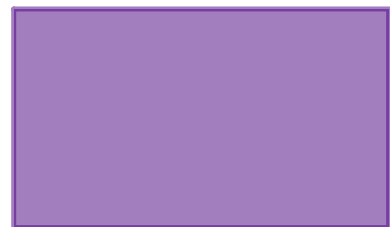
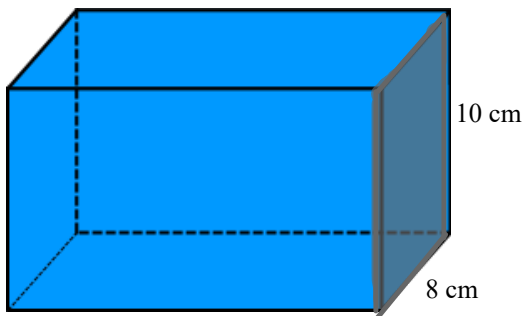
### Surface Area

What is Surface Area?

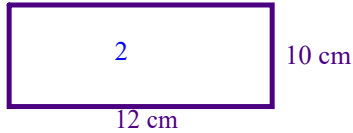
Surface area is the total area of all of the faces of the object.

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.



**Faces**  
**Front and Back - Rectangles**

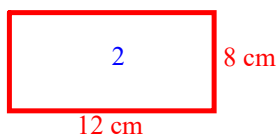


$$A = l \times w$$

$$= 12 \times 10$$

$$= 120 \text{ cm}^2$$

**Top and Bottom - Rectangles**

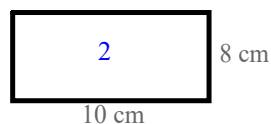


$$A = l \times w$$

$$= 12 \times 8$$

$$= 96 \text{ cm}^2$$

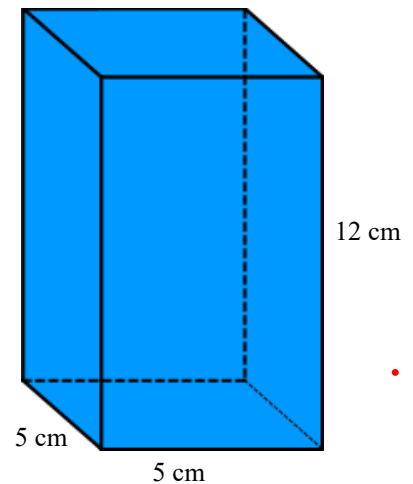
**2 sides - Rectangles**



$$A = l \times w$$

$$= 10 \times 8$$

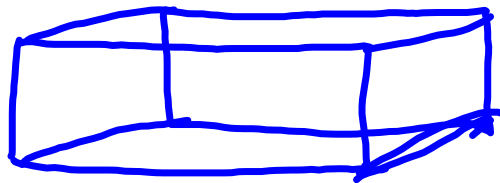
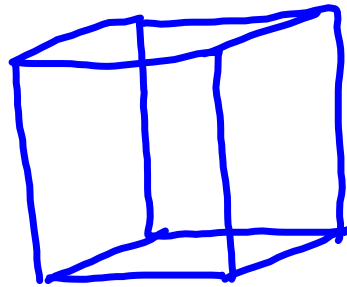
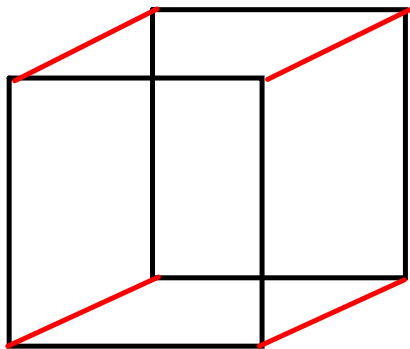
$$= 80 \text{ cm}^2$$



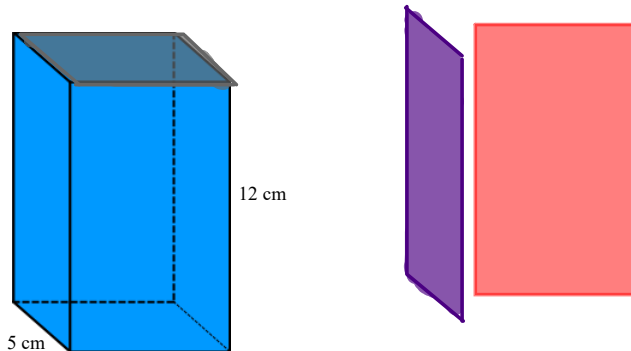
$$\text{Surface Area} = 2 \times 120 + 2 \times 96 + 2 \times 80$$

$$= 240 + 192 + 160$$

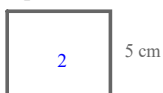
$$= 592 \text{ cm}^2$$



What is the surface area of this rectangular prism?



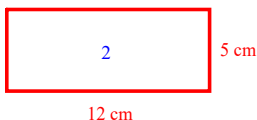
Top and Bottom



$$\begin{aligned} \text{Area} &= l \times w \\ &= 5 \times 5 \\ &= 25 \text{ cm}^2 \end{aligned}$$



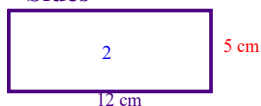
Front and Back



$$\begin{aligned} \text{Area} &= l \times w \\ &= 12 \times 5 \\ &= 60 \text{ cm}^2 \end{aligned}$$



Sides



$$\begin{aligned} \text{Area} &= l \times w \\ &= 12 \times 5 \\ &= 60 \text{ cm}^2 \end{aligned}$$



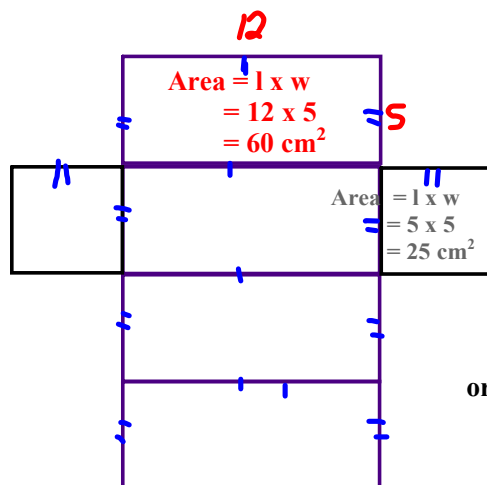
5 cm

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 multiply by 4.

$$\begin{aligned} \text{Surface Area} &= 2 \times 25 + 2 \times 60 + 2 \times 60 \\ &= 50 + 120 + 120 \\ &= 290 \text{ cm}^2 \end{aligned}$$

$$\begin{aligned} \text{or SA} &= 2 \times 25 + 4 \times 60 \\ &= 50 + 240 \\ &= 290 \text{ cm}^2 \end{aligned}$$



$$\begin{aligned} \text{or SA} &= 2 \times 25 + 4 \times 60 \\ &= 50 + 240 \\ &= 290 \text{ cm}^2 \end{aligned}$$

Homework pg. 186 # 4-7

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







# Warm-Up



# Warm-Up

1. A ship travels for 14 km toward the south. It then changes direction and travels for 9 km toward the east. How far does the ship have to travel to return directly to its starting point?

2. Use mental math.

a)  $3/4 \div 1/4$

b)  $\sqrt{36} + \sqrt{25}$

## Attachments

---

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