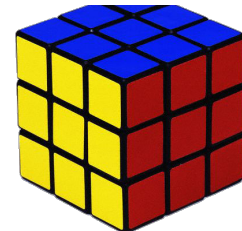




Warm Up Grade 8  
May 15, 2017



Assessment Review

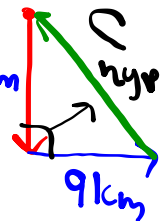
1. A ship travels for 14 km toward the south. It then changes direction and travels for 9 km toward the east. How far does the ship have to travel to return directly to its starting point?

The ship has to travel 16.6 km to return home.

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

$$= (14)^2 + (9)^2$$

$$c^2 = 196 + 81$$



2. Show work and answer.

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

→ flip 2nd fraction and multiply

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

$$= \frac{12}{4}$$

$$= 3$$

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

$$c^2 = 277$$

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

$$c = 16.6 \text{ km}$$

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

$$6 + 5$$

$$11$$

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

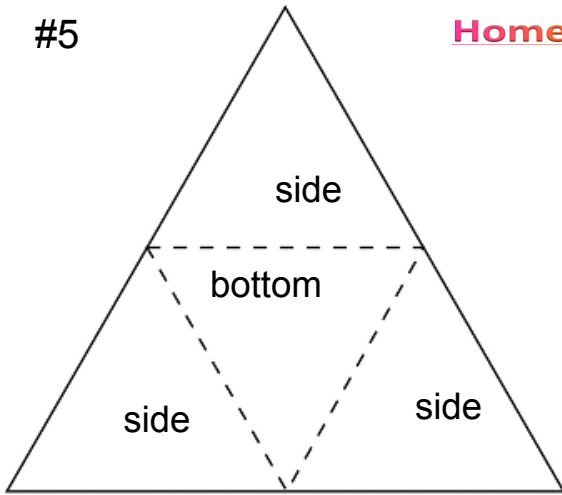
Net D → Triangular Prism  
(1st row middle) 2 triangles, 3 rectangles

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

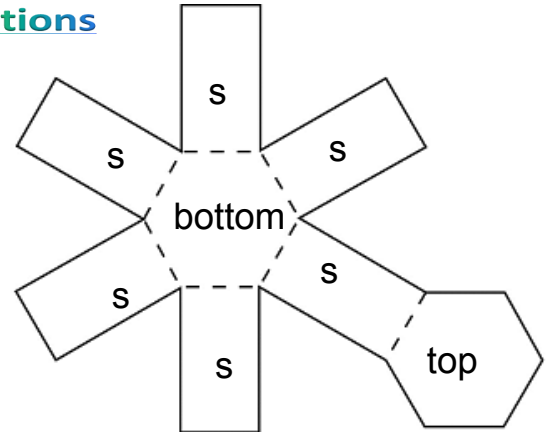
Net F → Cube with Square Pyramid  
on top  
(2nd row - left) 4 triangles, 5 squares

#5

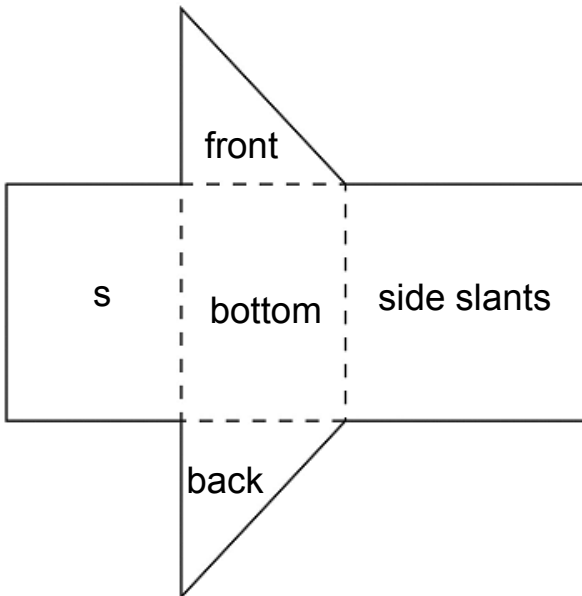
Homework Solutions



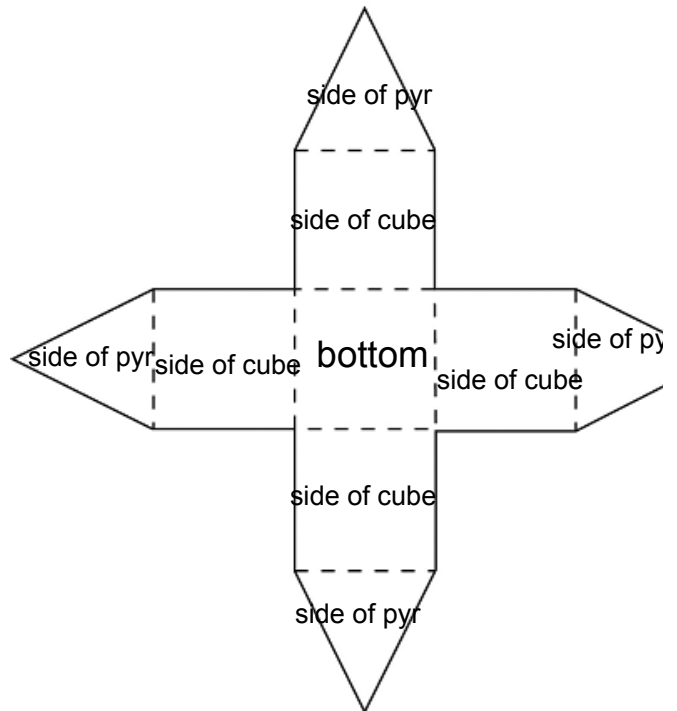
Net C



Net E

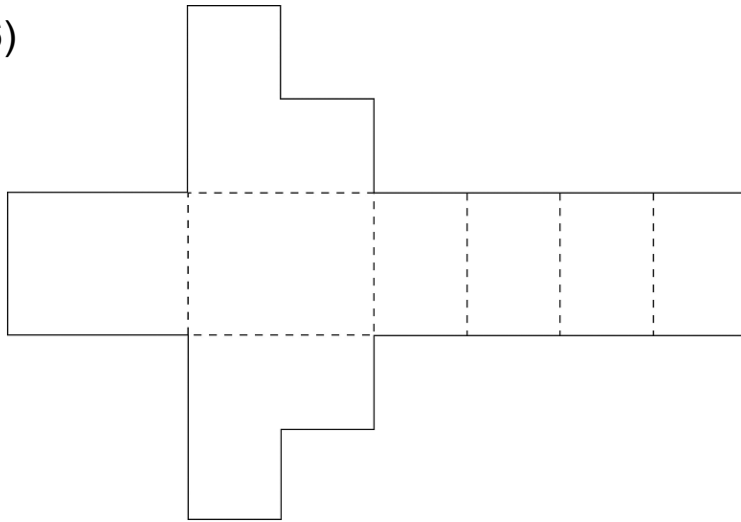


Net D



Net F

#6)

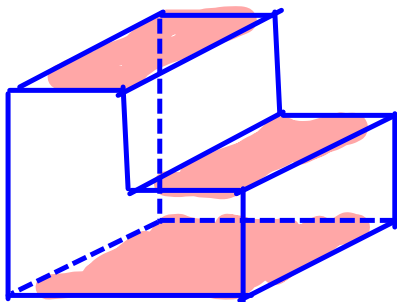


b. The object will look like a step

b) - net

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

d)

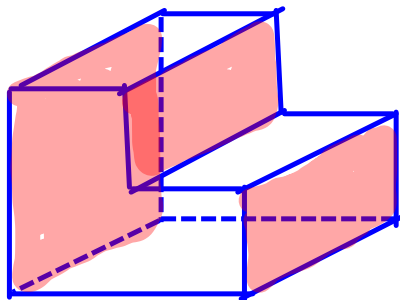


Parallel faces

Tops are ||

Bottoms are parallel

Sides are ||



Perpendicular faces

→ Top and front

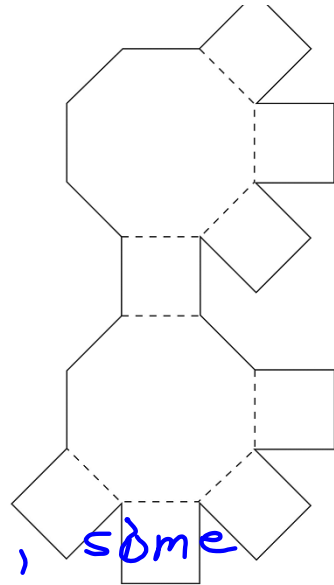
→ Side and Bottom

Page 180 #1, 4, 5

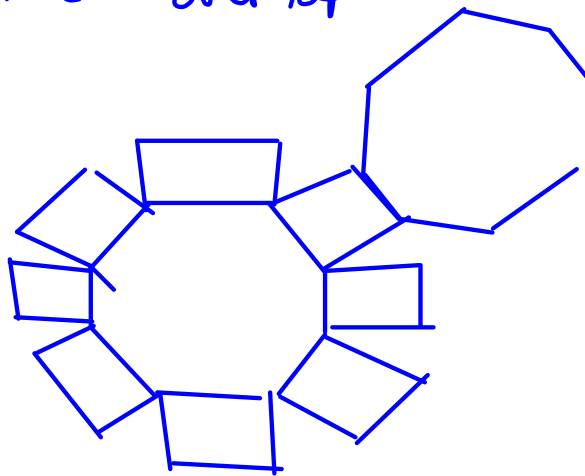
Page 181 #6, 7

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 hexagon

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

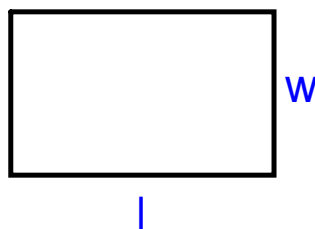
10. A is the net for the decagonal pyramid

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

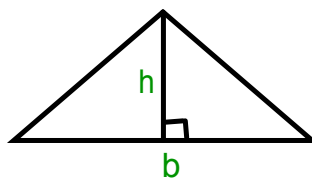
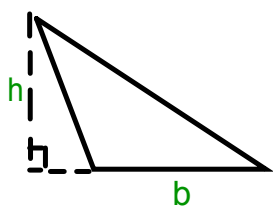
# Area of Polygons

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

$A_{\square} = \text{base} \times \text{height}$

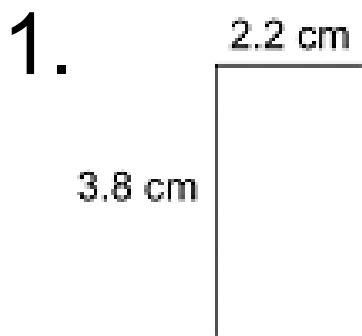


Area of a triangle  $A_{\triangle} = \frac{\text{base} \times \text{height}}{2}$  OR  $A = \frac{b \times h}{2}$



→ key locate  $\cdot 90^\circ$

Find the area of each rectangle.



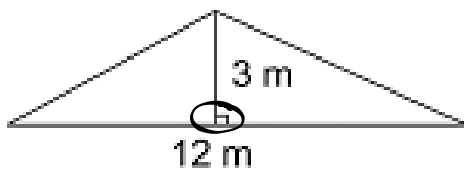
$$\begin{aligned} A &= b \times h \\ &= (2.2 \text{ cm}) \times (3.8 \text{ cm}) \\ &= 8.36 \text{ cm}^2 \end{aligned}$$



$$\begin{aligned} A &= b \times h \\ &= 12 \text{ mm} \times 4 \text{ mm} \\ &= 48 \text{ mm}^2 \end{aligned}$$

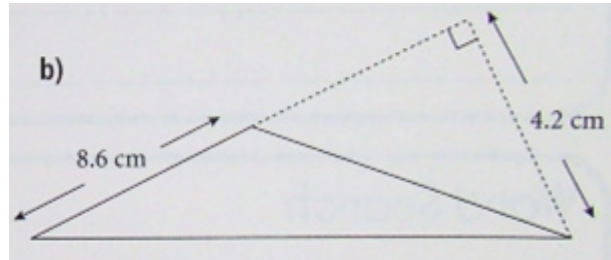
# Find the area of each triangle.

1.



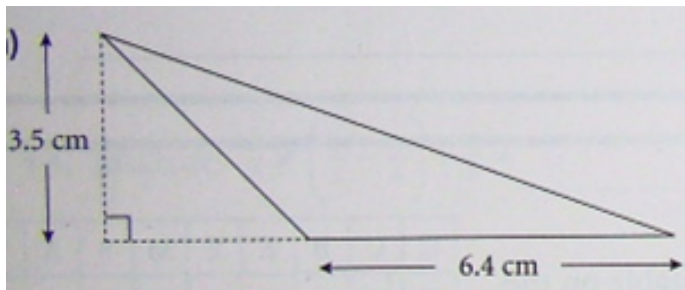
$$\begin{aligned}
 A_{\Delta} &= \frac{b \times h}{2} \\
 &= \frac{12\text{ m} \times 3\text{ m}}{2} \\
 &= \frac{36\text{ m}^2}{2} \\
 &= 18\text{ m}^2
 \end{aligned}$$

2.



$$\begin{aligned}
 A_{\Delta} &= \frac{b \times h}{2} \\
 &= \frac{8.6\text{ cm} \times 4.2\text{ cm}}{2} \\
 &= \frac{36.12\text{ cm}^2}{2} \\
 &= 18.06\text{ cm}^2
 \end{aligned}$$

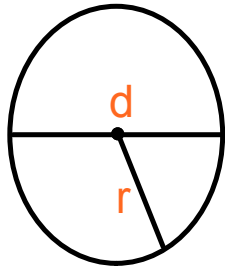
3.



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



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

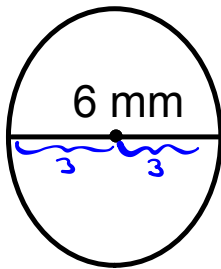


$$\text{radius} = \frac{1}{2} \text{ diameter}$$

$$\text{diameter} = 2 \times \text{radius}$$

Find the area of each circle.

1.

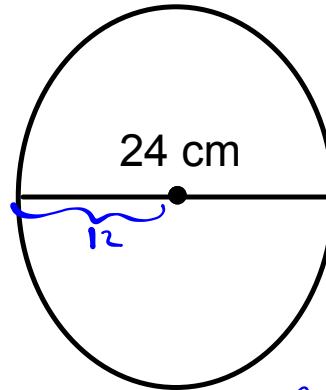


$$d = 6 \text{ mm}$$

$$r = 3 \text{ mm}$$

$$\begin{aligned} A_0 &= \pi r^2 \\ &= \pi (3 \text{ mm})^2 \\ &= 3.14 \times 9 \text{ mm}^2 \\ &= 28.26 \text{ mm}^2 \end{aligned}$$

2.

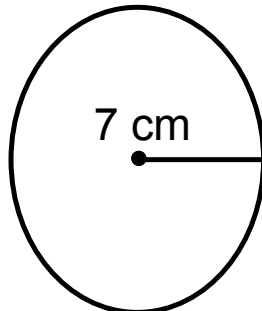


$$d = 24 \text{ cm}$$

$$r = 12 \text{ cm}$$

$$\begin{aligned} A_0 &= \pi r^2 \\ &= 3.14 (12 \text{ cm})^2 \\ &= 3.14 \times 144 \text{ cm}^2 \\ &= 452.16 \text{ cm}^2 \end{aligned}$$

3.



$$r = 7 \text{ cm}$$

$$\begin{aligned} A_0 &= \pi r^2 \\ &= 3.14 (7 \text{ cm})^2 \\ &= 3.14 \times 49 \text{ cm}^2 \\ &= 153.86 \text{ cm}^2 \end{aligned}$$

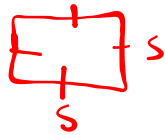
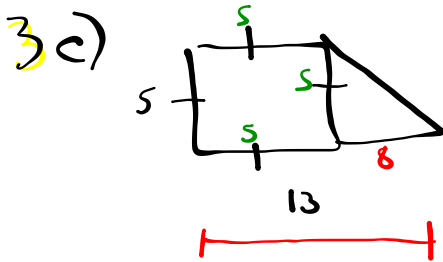
1 1  
**Class/Homework**

Worksheet of REVIEW

# labc 2 ace 3c

Homework





$$A_{\square} = 5 \times 5 = 25$$



$$A_{\triangle} = \frac{8 \times 5}{2} = \frac{40}{2} = 20$$

$$A_{\text{total}} = 25 + 20 = 45$$

Kobe  
and  
Andy  
Bo  
Bandy  
was  
here  
Joe



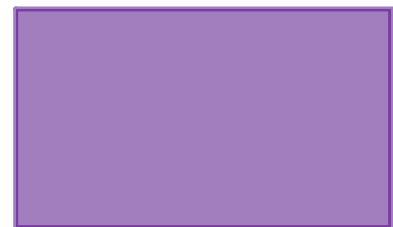
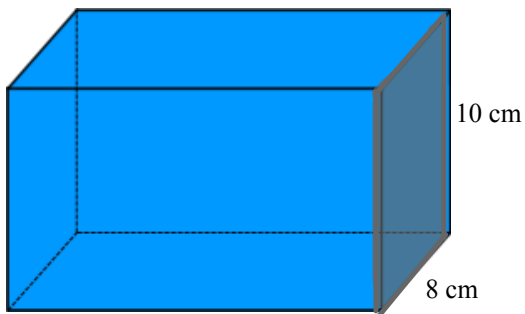
## Surface Area

What is Surface Area?

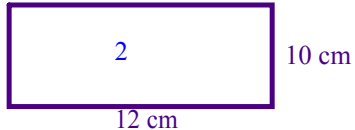
Surface area is the total area of all of the faces of the object.

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.

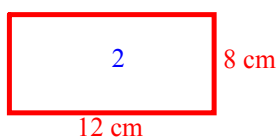


**Faces**  
**Front and Back - Rectangles**



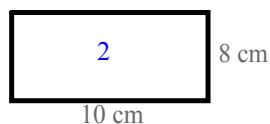
$$\begin{aligned} A &= l \times w \\ &= 12 \times 10 \\ &= 120 \text{ cm}^2 \end{aligned}$$

**Top and Bottom - Rectangles**

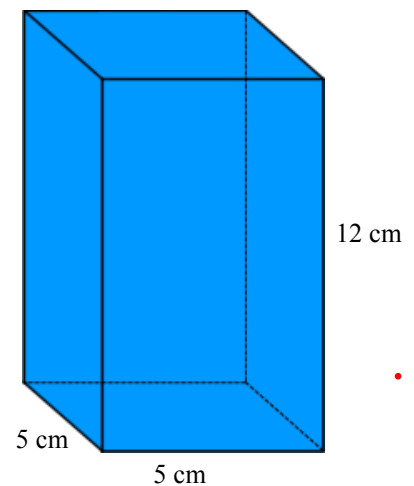


$$\begin{aligned} A &= l \times w \\ &= 12 \times 8 \\ &= 96 \text{ cm}^2 \end{aligned}$$

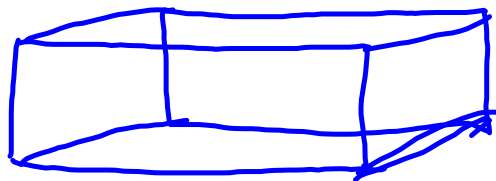
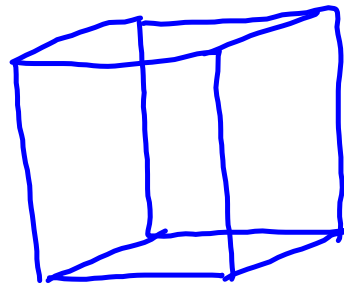
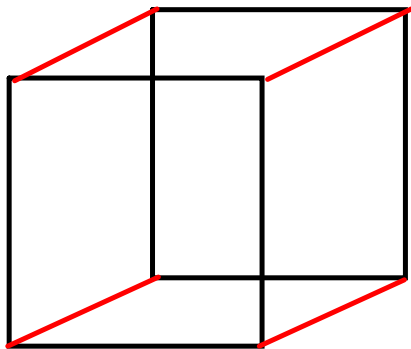
**2 sides - Rectangles**



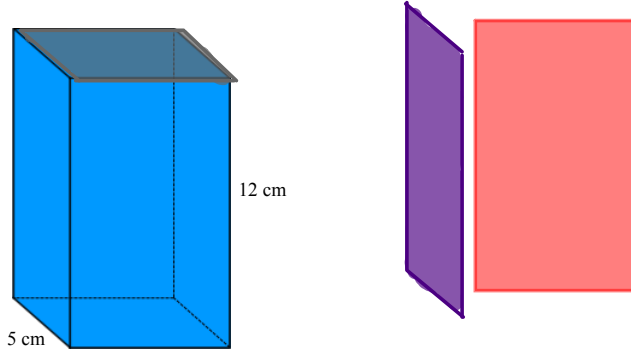
$$\begin{aligned} A &= l \times w \\ &= 10 \times 8 \\ &= 80 \text{ cm}^2 \end{aligned}$$



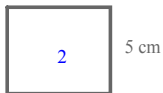
$$\begin{aligned} \text{Surface Area} &= 2 \times 120 + 2 \times 96 + 2 \times 80 \\ &= 240 + 192 + 160 \\ &= 592 \text{ cm}^2 \end{aligned}$$



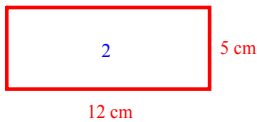
What is the surface area of this rectangular prism?



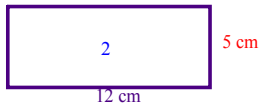
Top and Bottom



Front and Back



Sides



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



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



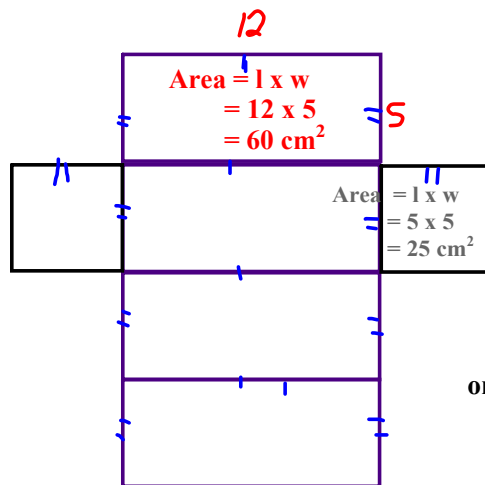
5 cm

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