Warm Up Grade 8

May 12, 2016

means multiply

Assessment Review

1. Leah has 3/4 of a large pizza. She gave 1/3 of what she had to Jessie. What fraction of the whole pizza does Jessie receive? What fraction of the whole pizza does Leah have left?

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

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

$\frac{3}{12}$

$\frac{1}{4}$ of the pizza is Jessie

Leah

$\frac{3}{4} - \frac{1}{4} = \frac{2}{4} = \frac{1}{2}$

Left $\frac{1}{2}$

Mental Math

1) 58 + 36

↓

60 + 36

96

2 too much

96 - 2

94

2) 8 x 1.5

8 x 1.5

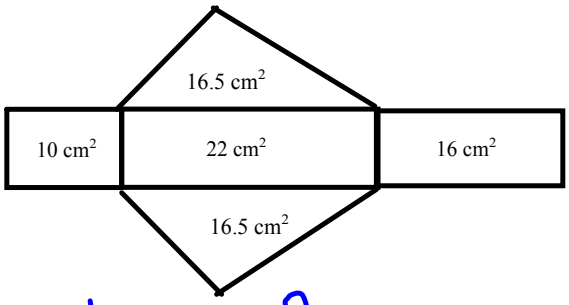
↓ half ↓ double

4 x 3.0

12.0

pg. 191

4.

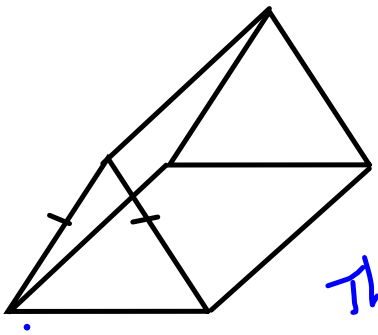


Find the surface area by adding the areas of all faces

SA = 10 + 22 + 16 + 16.5 + 16.5
= 48 + 33
= 81

or 10 + 22 + 16 + 2 x 16.5
= 48 + 33
= 81

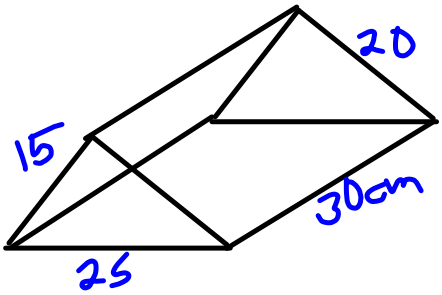
5.

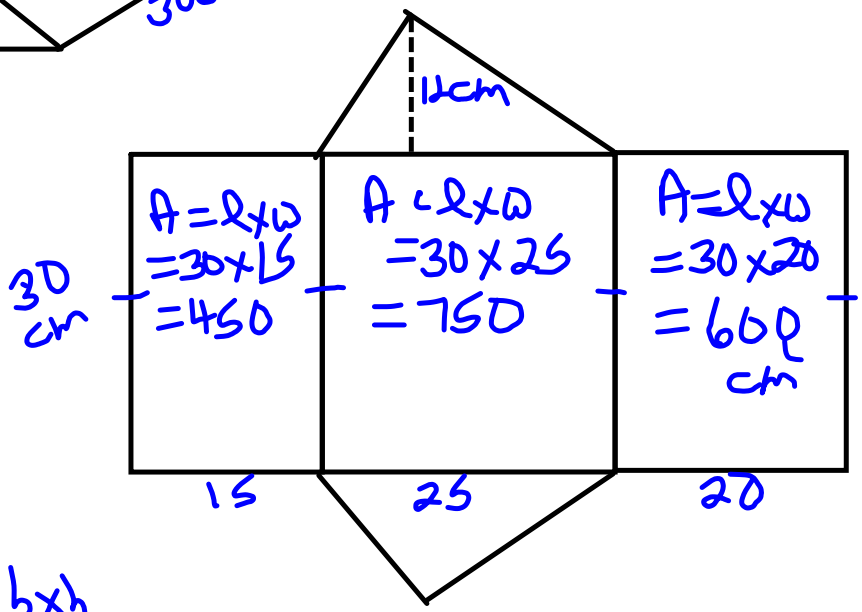


The bases of any prism are congruent and share the same area

The rectangles on the sides are congruent (since the lengths of the 2 sides in the triangle are the same).

6.





$A_\Delta = \frac{b \times h}{2}$

$= \frac{25 \times 12}{2} = \frac{300}{2}$

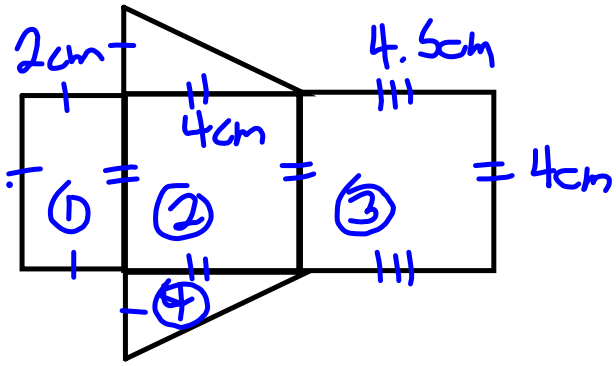
$= 150 cm^2$

$SA = 2 \times 150 + 450 + 750 + 600$

$= 300 + 450 + 750 + 600$

$= 2100 cm^2$

7. a)



$A_1 = l \times w$
$= 4 \times 2$
$= 8 cm$

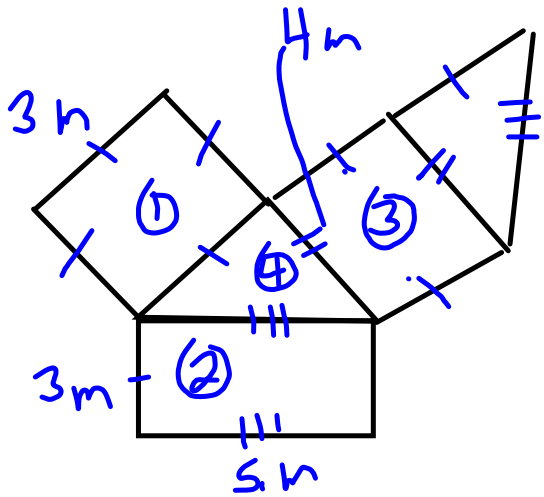
$A_2 = l \times w$
$= 4 \times 4$
$= 16 cm^2$

$A_3 = l \times w$
$= 4.5 \times 4$
$= 18 cm^2$

$A_4 = \frac{b \times h}{2}$
$= \frac{4 \times 2}{2}$
$= 4 cm^2$

$SA = 2 \times 4 + 8 + 16 + 18$
$= 8 + 8 + 16 + 18$
$= 50 cm^2$

7b)



$A_① = l \times w$
$= 3 \times 3$
$= 9\ m^2$

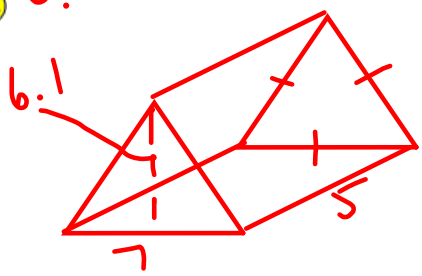
$A_② = l \times w$
$= 3 \times 5$
$= 15\ m^2$

$A = l \times w$
$= 4 \times 3$
$= 12\ m^2$

$A_④ = \frac{b \times h}{2}$
$= \frac{4 \times 3}{2}$
$= 6\ m^2$

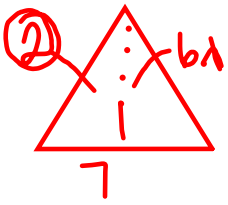
$SA = 2 \times 6 + 9 + 15 + 12$
$= 12 + 9 + 15 + 12$
$= 48\ m^2$

8. Prism A



Front & Back

Sides

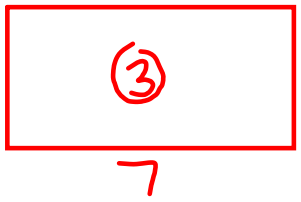
② 

$A = \frac{b \times h}{2}$

$= \frac{7 \times 6.1}{2}$

$= \frac{42.7}{2}$

$= 21.35$

③ 

$A = l \times w$

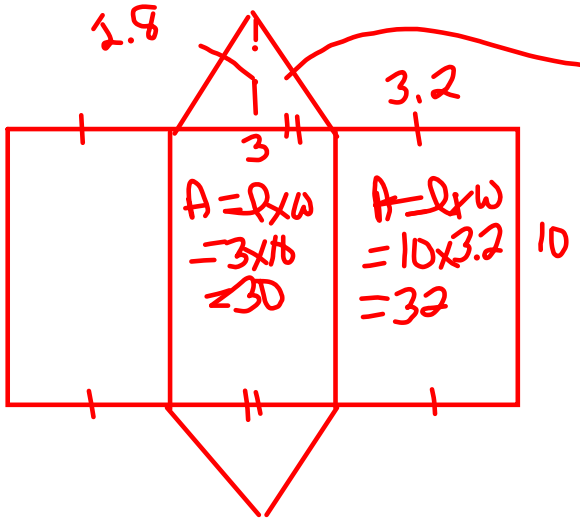
$= 7 \times 5$

$= 35$

$SA = 2 \times 21.35 + 3 \times 35$

$= 42.7 + 105$

$= 147.7 \text{ cm}^2$

b) 

$A_\Delta = \frac{b \times h}{2}$

$= \frac{3 \times 2.8}{2}$

$= \frac{8.4}{2}$

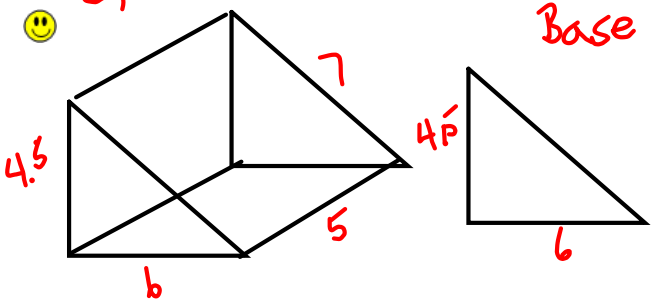
$= 4.2$

$SA = 2 \times 32 + 30 + 2 \times 4.2$

$= 64 + 30 + 8.4$

$= 102.2 \text{ cm}^2$

8 c)



$A = \frac{b \times w}{2}$

$= \frac{6 \times 4.5}{2}$

$= \frac{27}{2}$

$= 13.5 \text{ cm}^2$

Sides

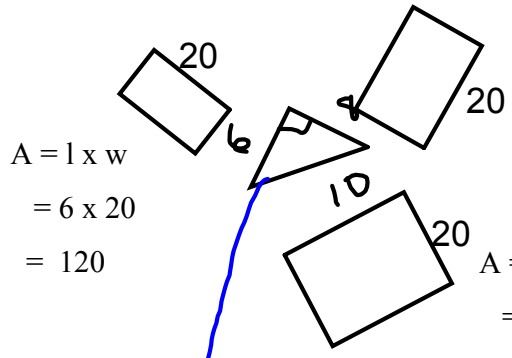
A = l x w
= 6 x 5
= 30

A = l x w
= 5 x 4.5
= 22.5

A = l x w
= 7 x 5
= 35

Total SA = 2(13.5) + 30 + 22.5 +35
= 27 + 30 + 22.5 + 35
= 114.5 cm²

d)



A = l x w
= 6 x 20
= 120

A = l x w
= 8 x 20
= 160

A = l x w
= 10 x 20
= 200

$A = \frac{b \times h}{2}$

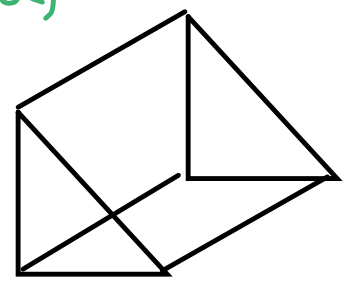
$= \frac{6 \times 8}{2}$

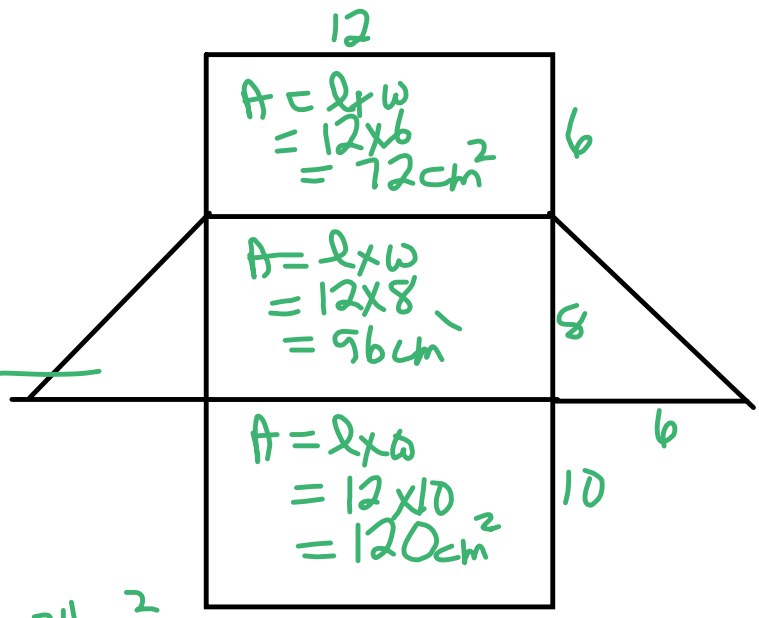
$= \frac{48}{2}$

$= 24 \text{ cm}^2$

Total SA = 2(24) + 120 + 160 +200
= 48 + 120 + 160 + 200
= 528 cm²

9 a)





$A = 12 \times 6 = 72\,cm^2$

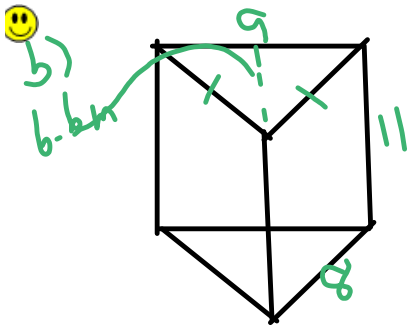
$A = 12 \times 8 = 96\,cm^2$

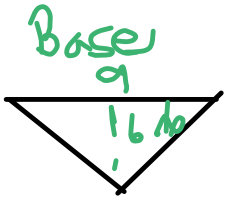
$A = 12 \times 10 = 120\,cm^2$

$A = \frac{b \times h}{2} = \frac{6 \times 8}{2} = \frac{48}{2} = 24\,cm^2$

$SA = 2 \times 24 + 72 + 96 + 120$
$= 48 + 72 + 96 + 120$
$= 236\,cm^2$

b)





$A = \frac{b \times h}{2} = \frac{9 \times 6.4}{2} = \frac{59.4}{2} = 29.7\,m^2$

Sides

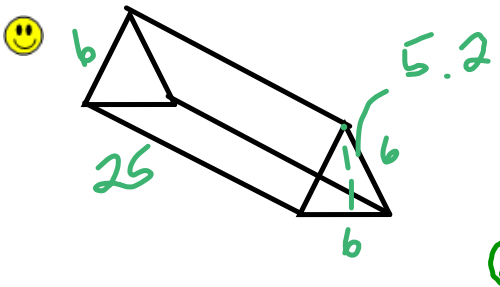
$A = 11 \times 8 = 88\,m^2$

Bottom

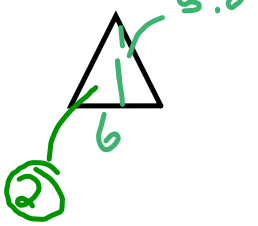
$A = 11 \times 9 = 99\,m^2$

$SA = 2 \times 29.7 + 2 \times 88 + 99$
$= 59.7 + 176 + 99$
$= 334.4\,m^2$

c)



Bases



$A = \frac{b \times h}{2}$

$= \frac{6 \times 5.2}{2}$

$= \frac{31.2}{2}$

$= 15.6 \text{ mm}^2$

Sides

$A = l \times w$

$= 25 \times 6$

$= 150 \text{ mm}^2$

$SA = 2 \times 15.6 + 3 \times 150$

$= 31.2 + 450$

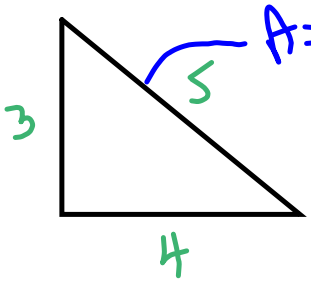
$= 481.2 \text{ mm}^2$

10.

$A = 30 cm^2$ $A = 3 \times 10$

$A = 40 cm^2$ $A = 4 \times 10$

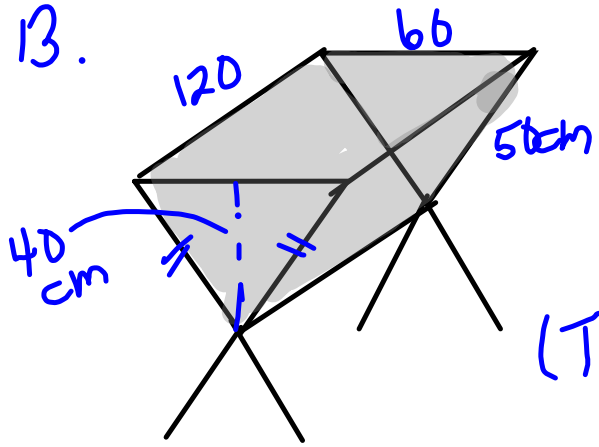
$A = 50 cm$ $A = 5 \times 10$



$A = 6 cm^2$ $\frac{3 \times 4}{2} = 6$

The dimension of the triangle are:
base 4cm, height - 3cm (other side 5cm)
and the height of the prism
is 10 cm

13.

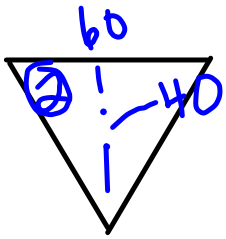


Water Trough

→ Faces

2 triangles, 2 rectangle

(The is no face on the top)

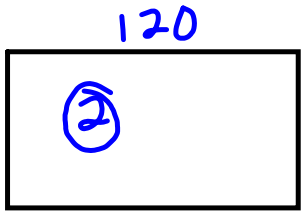


$A = \frac{b \times h}{2}$

$= \frac{60 \times 40}{2}$

$= \frac{2400}{2}$

$= 1200$



$A = l \times w$

$= 120 \times 50$

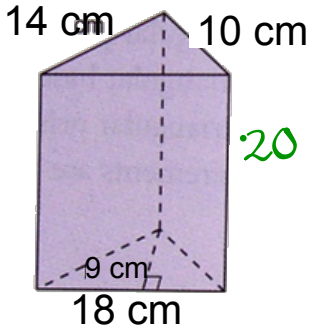
$= 6000$

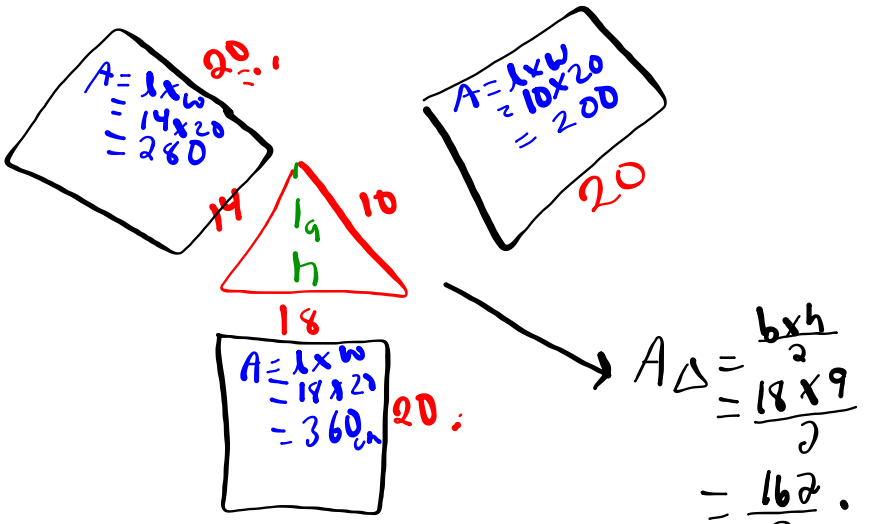
Area of metal $= 2 \times 1200 + 2 \times 6000$

$= 2400 + 12\,000$

$= 14\,400\ cm$

This right triangular prism is a door stop and needs to be covered in tar on the outside faces. What is the surface area to be covered?





Total SA = 2△ + Rect + Rect + Rect

= 2(81 cm²) + 360 cm² + 200 cm² + 280 cm²

= 162 cm² + 360 cm² + 200 cm² + 280 cm²

= 1002 cm²

Class/Homework

Sheet

Extra Practice 4.4 SA of Triangular Prism

Quiz Tomorrow???

Extra Practice 4 – **Master 4.39**
Lesson 4.4

1. a) 408 cm²
   b) 672 cm²
   c) 97.5 cm²
2. 104 cm²
3. 441.4 cm²
4. Right triangle
   a) 840 mm²
   b) 1740 mm²

Attachments

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

Surface Area of Prisms WS Review PDF.pdf

Extra Practice 2 Unit 4.4.pdf