

TOPIC TEST : PERIMETER & AREA

Name: \_\_\_\_\_

1. Measure the interval below in millimetres

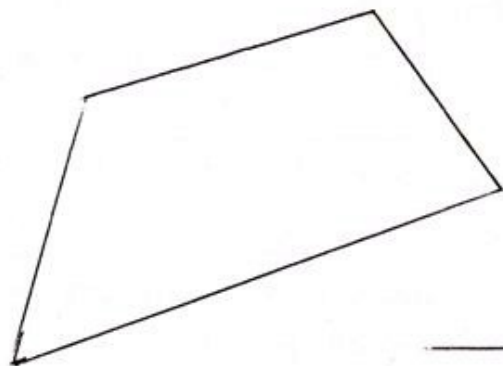


2. From the list below what instrument would you use to measure the following:

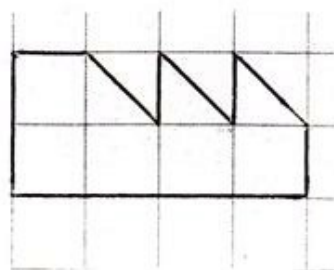
[trundle wheel, tape measure, ruler, odometer.]

- a) Distance from Eden to Merimbula \_\_\_\_\_
- b) Height of the door \_\_\_\_\_
- c) Width of a textbook \_\_\_\_\_
- d) Length of the oval \_\_\_\_\_

3. Measure the perimeter of the shape below in cms.



4. What is the area of the shape below in cm<sup>2</sup>?

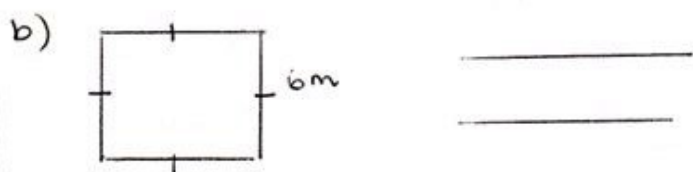
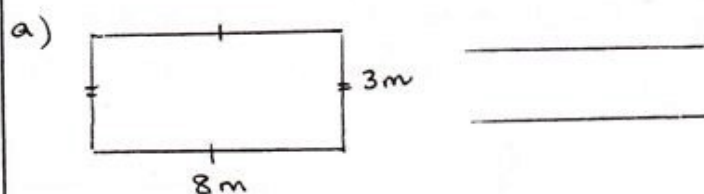


5. Complete

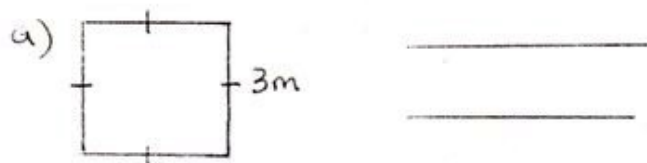
- a) 4cm = \_\_\_\_\_ mm
- b)  $\frac{1}{2}$  m = \_\_\_\_\_ cm
- c) 400m = \_\_\_\_\_ km

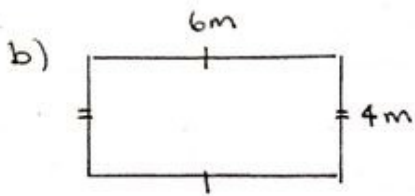
6. Draw a diagram below showing the dimensions for 1 hectare in m<sup>2</sup>

7. Find the perimeter of the following (not to scale)



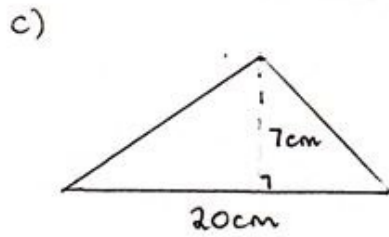
8. Find the area of the following





\_\_\_\_\_

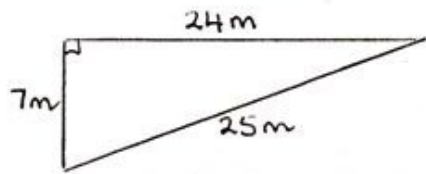
\_\_\_\_\_



\_\_\_\_\_

\_\_\_\_\_

9. Find the perimeter and area below

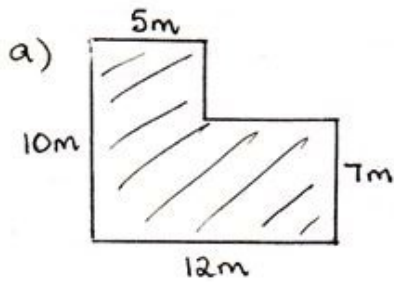


P = \_\_\_\_\_

A = \_\_\_\_\_

\_\_\_\_\_

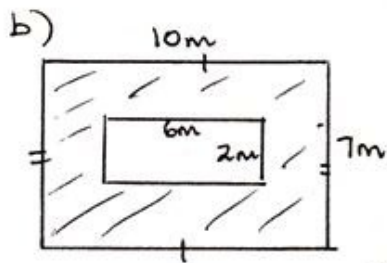
10. Find the shaded areas below. Show your working.



Area A = \_\_\_\_\_

Area B = \_\_\_\_\_

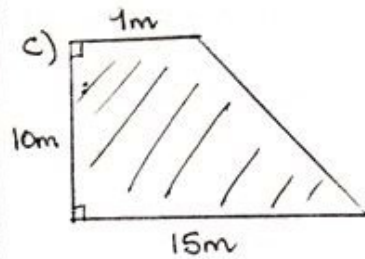
Total area = \_\_\_\_\_



Large Rectangle = \_\_\_\_\_

Small Rectangle = \_\_\_\_\_

Shaded Area = \_\_\_\_\_

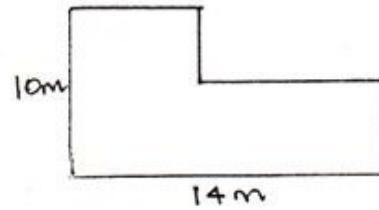


\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

11. Find the perimeter of the shape below



\_\_\_\_\_

12. a) Draw  $1\text{cm}^2$  in the space below

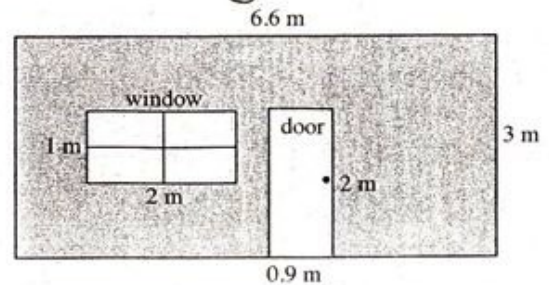
b) Complete  $1\text{cm}^2 = \underline{\hspace{2cm}} \text{mm}^2$

13. A room is  $15\text{m}$  by  $4\text{m}$ . It is to be tiled and the tiles cost  $\$20/\text{m}^2$ .

a) What is the area of the room? \_\_\_\_\_

b) What is the cost of tiling the room? \_\_\_\_\_

14. The wall below needs painting. If one litre of paint covers  $3\text{m}^2$  of wall, how many whole litres should be bought?



\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

1. Convert the following to the indicated units.

(a) 2000 m = \_\_\_\_\_ km

(d)  $3\frac{1}{2}$  cm = \_\_\_\_\_ mm

(b) 4.21 km = \_\_\_\_\_ m

(e) 420 mm = \_\_\_\_\_ cm

(c) 37 cm = \_\_\_\_\_ mm

2. Choose A, B, C or D:

(a) The width of a pencil is closest to:

A. 1 mm

B. 1 cm

C. 10 cm

D. 1 m

(b) The length of a fork is closest to:

A. 2cm

B. 10 cm

C. 20 cm

D. 40 cm

(c) The distance from Brisbane to Sydney is closest to:

A. 100 km

B. 900 km

C. 2000 km

D. 5000 km

(d) The height of a ceiling is closest to:

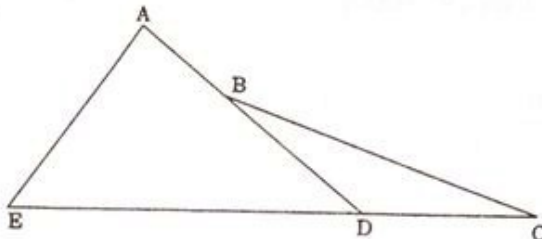
A. 1 m

B. 2.5 m

C. 14 m

D. 7 m

3.



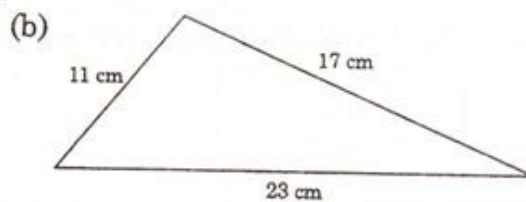
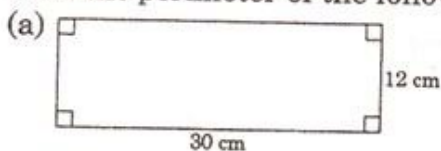
Measure the following lengths, in mm:

(a) AE

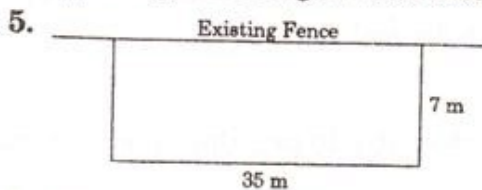
(b) AD

(c) BC

4. Find the perimeter of the following:



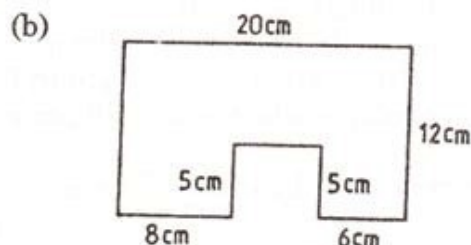
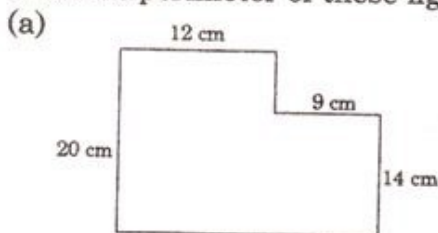
(c) a regular octagon with side 7 cm.



A farmer wishes to enclose an area measuring 35 metres by 7 metres using an existing fence as a fourth side. How much fencing will be required?

6. If the perimeter of a rectangle is known to be 96 mm and the length is 28 mm, find the width.

7. Find the perimeter of these figures:



8. A lounge room is in the shape of a rectangle measuring 5.2 metres long and 3.8 metres wide. A wallpaper frieze is to be pasted along the top of each wall around the room. Each roll of the frieze costs \$21.90 and covers a 5 metre length.

(a) What is the perimeter of the room?

(b) How many rolls will need to be purchased to complete the job?

(c) What will be the total cost of the rolls?

9. Convert to the indicated units.

- (a) 300 minutes = \_\_\_ hours
- (b) 4 days = \_\_\_ hours
- (c)  $6\frac{1}{2}$  minutes = \_\_\_ seconds
- (d)  $\frac{3}{4}$  hour = \_\_\_ minutes
- (e) 0.2 minutes = \_\_\_ seconds
- (f) 60 hours = \_\_\_ days
- (g) 2000 years = \_\_\_ centuries
- (h) 60 years = \_\_\_ decades

10. How much time has elapsed between:

- (a) 4:17 am and 4:52 am (same day)
- (b) 11:19 am and 3:14 pm (same day)
- (c) 3:37 pm and 4:12 am (next day)

11. Calculate the number of days between:

- (a) 4th August and Christmas Day
- (b) New Year's Day and Anzac Day (in 2000)

12. Complete the table:

12 hour time	24 hour time
4:17 am	
	1142
3:47 pm	
	2148

13. The digital clock below is 6 minutes fast.

4:02

What is the correct time?

- 14. Mitchell went to his bed at 8:45 pm and 15 minutes later fell asleep. He then slept for 9 hours 20 minutes. What time did Mitchell
  - (a) fall asleep?
  - (b) wake up next morning?
- 15. Laura begins work at 10:45 am and finishes at 7:15 pm. She is paid at the rate of \$12 per hour for this work.
  - (a) How many hours did she work?
  - (b) What is her pay for the day's work?
- 16. In winter, when it is noon in Sydney it is 11:30 am in Adelaide and 10 am in Perth. What time is it in
  - (a) Adelaide when it is 3:40 pm in Sydney
  - (b) Sydney when it is 4:52 pm in Perth
  - (c) Adelaide when it is 11:43 pm in Perth

17. Express in 12-hour digital time

(a)



(b)



18. Here is a local bus timetable:

- (a) How long is the bus ride from
  - (i) Grace St to Parallel St
  - (ii) John St to City Centre
- (b) If the bus is five minutes late, what time will it arrive at City Centre?
- (c) Fiona catches a later bus which travels the same route at the same speed. If it leaves Grace St at 7:42, what time will it reach City Centre.

Macquarie St	4:39
John St	4:48
Grace St	5:02
Coolah Av	5:17
Parallel St	5:22
River Rd	5:29
City Centre	5:36

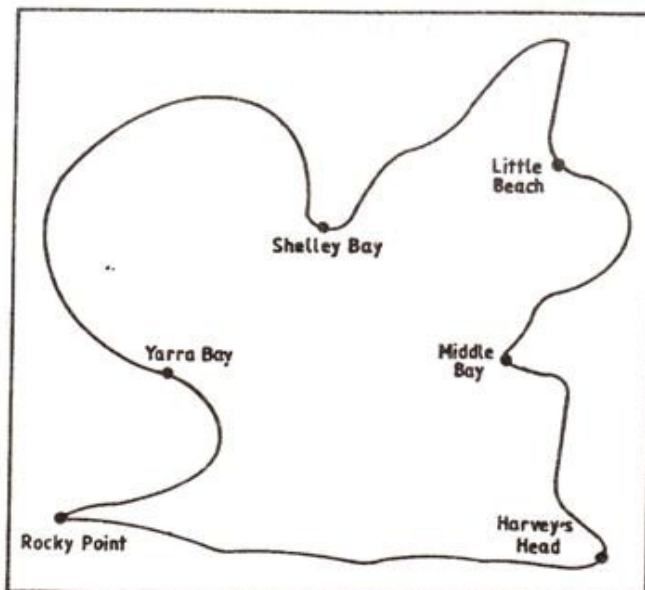
19. This table shows the time difference between major cities around the world. (daylight saving alterations have been ignored)

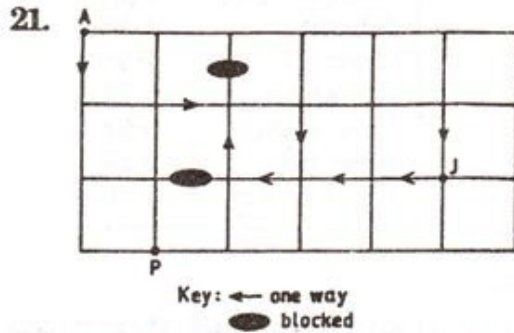
Los Angeles: 4 am	Calcutta: 5:30 pm
New York: 7 am	Tokyo: 9 pm
London: Noon	Sydney: 10 pm
Jerusalem: 2 pm	Auckland: Midnight

- (a) How many hours is Auckland ahead of Sydney?
- (b) How many hours is New York behind Jerusalem?
- (c) If it is 4 pm in London, what time is it in Los Angeles?
- (d) A golf tournament finishes in Los Angeles at 5:30 pm on Sunday. What time is it in Sydney?
- (e) If the Sydney Olympic Games organisers plan the Opening Ceremony to be seen live in New York during their peak viewing time of 9 pm, what time will it take place in Sydney?

20. A map is drawn using a scale of 1 cm = 10 km.

- Find the distances between
- (a) Rocky Point and Harvey's Head.
  - (b) Little Beach and Yarra Bay



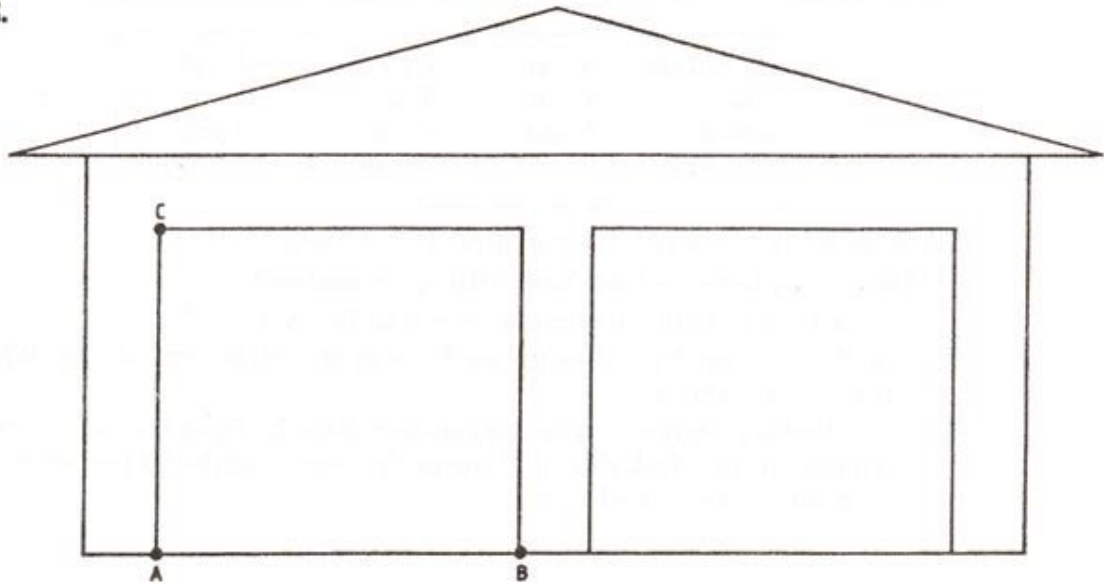


The grid represents a street pattern with a scale of 1 cm = 400 m. Some streets are marked as ONE WAY and others are blocked.

Answer the following question (in kilometres):

- (a) Allyn lives in house A and wants to travel to Peter's house P. How far will he travel?
- (b) Allyn then moves on to John's house J. How far has he now travelled since leaving his own house?
- (c) If Allyn wants now to leave John's house and return home, what is his shortest distance home?

22.



The width of the garage door AB is 2.5 metres.

- (a) Show that the scale used is 1 cm = 0.5m.
- (b) Find the height of the garage door AC in metres
- (c) Find the height of the garage.

MEASUREMENTASSIGNMENT

NAME. \_\_\_\_\_

Question 1.

Complete:

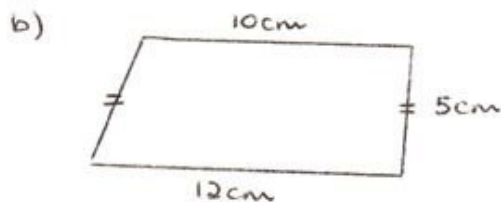
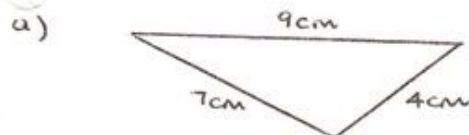
- a)  $4\text{cm} = \underline{\hspace{2cm}}\text{mm}$   
 b)  $3\text{km} = \underline{\hspace{2cm}}\text{m}$   
 c)  $3.2\text{m} = \underline{\hspace{2cm}}\text{cm}$   
 d)  $0.2\text{m} = \underline{\hspace{2cm}}\text{mm}$   
 e)  $400\text{mm} = \underline{\hspace{2cm}}\text{cm}$   
 f)  $750\text{cm} = \underline{\hspace{2cm}}\text{m}$

Question 2

Measure these lines to the nearest mm.

Question 3

Calculate the perimeter of each figure.



- c) a square with side  $7\text{cm}$   
 d) a rectangle with length  $4\text{cm}$  and breadth  $2\text{cm}$   
 e) a regular pentagon with sides  $9\text{cm}$ .

Question 4.

Complete the following

- a)  $1\text{ year} = \underline{\hspace{2cm}}\text{ days}$   
 b)  $1\text{ leap year} = \underline{\hspace{2cm}}\text{ days}$   
 c)  $1\text{ year} = \underline{\hspace{2cm}}\text{ months}$   
 d)  $1\text{ year} = \underline{\hspace{2cm}}\text{ weeks}$   
 e)  $3\text{h} = \underline{\hspace{2cm}}\text{ mins}$   
 f)  $1\frac{1}{4}\text{ min} = \underline{\hspace{2cm}}\text{ s}$   
 g)  $48\text{h} = \underline{\hspace{2cm}}\text{ days}$   
 d)  $90\text{ min} = \underline{\hspace{2cm}}\text{ h}$ .

Question 5

a) Find the time difference between

(i)  $9:30\text{am}$  and  $10:20\text{am}$ (ii)  $9:12\text{am}$  and  $2:05\text{pm}$ b) What time is it 3 hours before  $2:40\text{pm}$ ?c) What time is it  $1\frac{1}{2}$  hours after  $11:10\text{am}$ ?

d) What day is it 4 days before 3rd June?

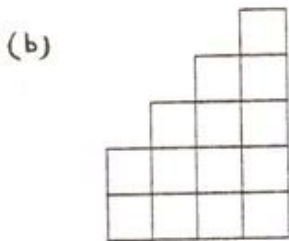
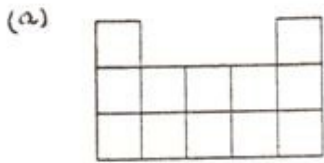
Question 6.

Write these times in 24-hour time.

- a)  $6:20\text{am}$   
 b)  $2:10\text{pm}$   
 c)  $12:15\text{am}$ .

Question 7

What is the area of each figure in square units?



Question 8

Complete

a)  $1 \text{ cm}^2 = \underline{\hspace{2cm}} \text{ mm}^2$

b)  $1 \text{ m}^2 = \underline{\hspace{2cm}} \text{ cm}^2$

c)  $1 \text{ ha} = \underline{\hspace{2cm}} \text{ m}^2$

d)  $1 \text{ m}^2 = \underline{\hspace{2cm}} \text{ mm}^2$

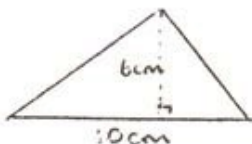
Question 9

Find the areas below

a) a square side 9cm

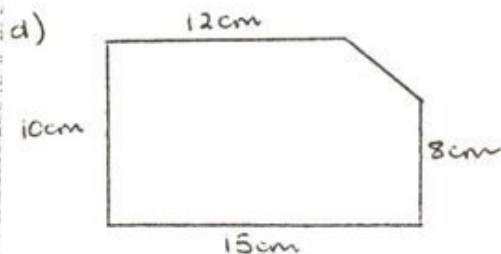
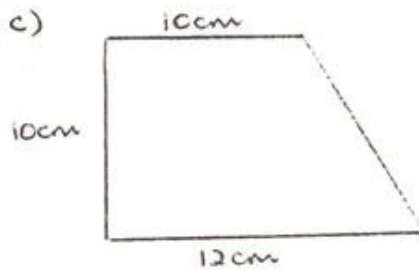
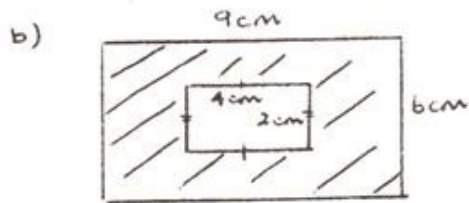
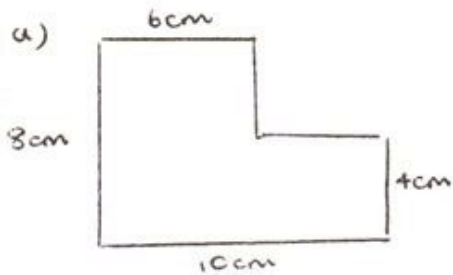
b) a rectangle 4m by 3m

c)



Question 10

Find the areas below by dividing your figure into parts. Show your working.



Question 11

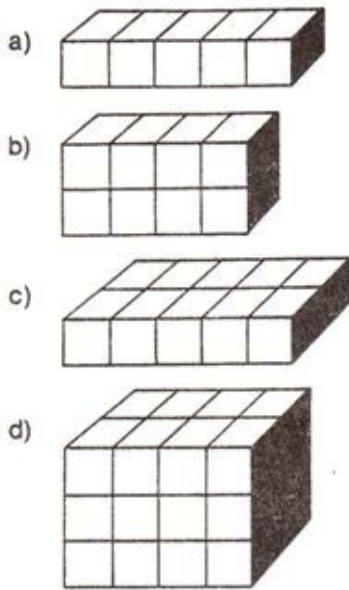
A concrete path  $1\frac{1}{2}$  m wide is to be cemented around a garden which is 6m by 4m. If concrete costs \$12/m<sup>2</sup> how much will it cost.

NB Draw a diagram and show all working.



Question 12

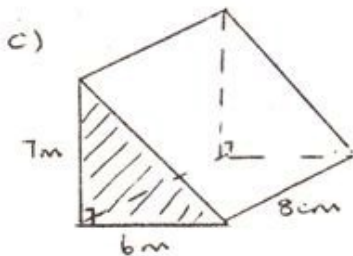
What is the volume of each figure in cubic units?



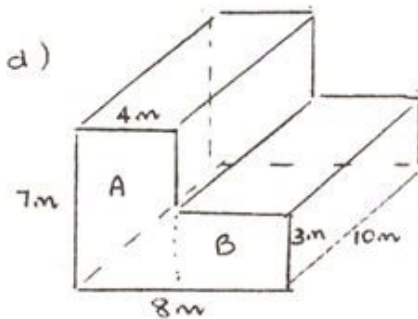
Question 13

Find the volume of  
a) a cube side 5cm

b) a rectangular prism with length 6cm, breadth 4cm and height 2cm.

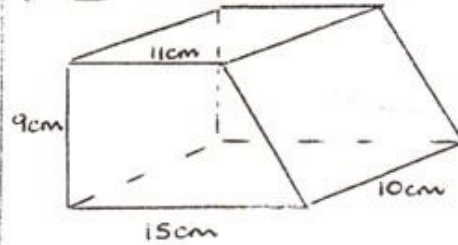


Shaded area = \_\_\_\_\_  
Volume = \_\_\_\_\_



Area A = \_\_\_\_\_  
Area B = \_\_\_\_\_  
Total area = \_\_\_\_\_  
Volume = \_\_\_\_\_

(e) NB SHOW WORKING.



Question 14.

Complete

- a) 1 L = \_\_\_\_\_ mL
- b) 3000 mL = \_\_\_\_\_ L
- c) 2570 mL = \_\_\_\_\_ L
- d) 1.2 kL = \_\_\_\_\_ L
- e) 1 cm<sup>3</sup> = \_\_\_\_\_ mL
- f) 7 mL = \_\_\_\_\_ cm<sup>3</sup>
- g) 500 cm<sup>3</sup> = \_\_\_\_\_ mL
- h) 1 L = \_\_\_\_\_ cm<sup>3</sup>
- i) 1 m<sup>3</sup> = \_\_\_\_\_ L
- j) 1 m<sup>3</sup> = \_\_\_\_\_ kL.

Question 15

What would the capacity be in mls of a rectangular prism 7cm by 3cm by 4cm?

Question 16.

Complete

- a)  $5000\text{ g} = \underline{\hspace{2cm}}\text{ kg}$
- b)  $2500\text{ kg} = \underline{\hspace{2cm}}\text{ t}$
- c)  $2.4\text{ kg} = \underline{\hspace{2cm}}\text{ g}$
- d)  $0.2\text{ t} = \underline{\hspace{2cm}}\text{ g}$

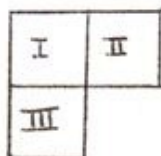
Question 17

Calculate the missing mass

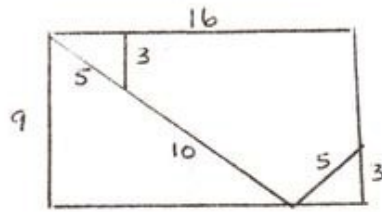
- a) gross mass =  $200\text{ g}$   
net mass =  $150\text{ g}$   
container's mass =  $\underline{\hspace{2cm}}$
- b) gross mass =  $2.4\text{ kg}$   
containers mass =  $200\text{ g}$   
net mass =  $\underline{\hspace{2cm}}$
- c) net mass =  $900\text{ g}$   
containers mass =  $150\text{ g}$   
gross mass =  $\underline{\hspace{2cm}}$

Question 18      PROBLEMS

Through a mix-up in a real estate deal, 4 families claimed rights to 3 sections of land. The agent suggested that they refund some money and then divide the 3 equal lots into 4 equal areas. This was agreeable but all 4 families wanted the exact same area and all wanted the same shaped plot. How did they divide this ground into 4 parts equal in area and identical in shape?



(ii)



When the 16 by 9 rectangle in the diagram is cut in the manner shown, the pieces can form a square of perimeter (A) 50 (B) 48 (C) 32 (D) 40 (E) 36.

(iii) The side, front and bottom faces of a rectangular solid have areas of 32, 24 and 48  $\text{cm}^2$  respectively. What is the volume of the rectangular solid in  $\text{cm}^3$ ?

(iv) Joe has some spheres, all of which weigh the same. He also has some cubes all which weigh the same. He discovered that 4 spheres and 3 cubes weigh 37g and that 3 spheres and 4 cubes weigh 33g. What is the weight in grams of one sphere and one cube together?

## MEASUREMENT TEST

NAME \_\_\_\_\_



### Question 1 (6 MARKS)

Complete:

- a)  $3\text{cm} = \underline{\hspace{2cm}}\text{mm}$   
b)  $2\text{km} = \underline{\hspace{2cm}}\text{m}$   
c)  $4.8\text{m} = \underline{\hspace{2cm}}\text{cm}$   
d)  $0.37\text{m} = \underline{\hspace{2cm}}\text{mm}$   
e)  $720\text{mm} = \underline{\hspace{2cm}}\text{cm}$   
f)  $840\text{cm} = \underline{\hspace{2cm}}\text{m}$

### Question 2 (2 MARKS)

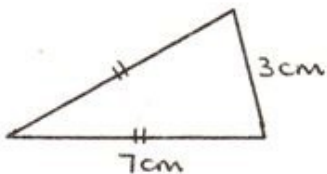
Measure these lines to the nearest mm.

- a)   
b) 

### Question 3 (4 MARKS)

Calculate the perimeter of each figure.

a)



- b) a square with side 5cm  
c) a rectangle with length 8cm and breadth 3cm  
d) a regular hexagon with side 7cm.

### Question 4 (8 MARKS)

Complete the following

- a) 1 year = \_\_\_\_\_ months  
b) 1 year = \_\_\_\_\_ weeks  
c) 1 leap year = \_\_\_\_\_ days  
d) 1 year = \_\_\_\_\_ fortnights  
e) 2 h = \_\_\_\_\_ mins  
f)  $3\frac{1}{2}$  mins = \_\_\_\_\_ s  
g) 1 h = \_\_\_\_\_ s  
h) 75 mins = \_\_\_\_\_ h.

### Question 5 (7 MARKS)

a) What time is it 2 hours before

- (i) 8:30 am \_\_\_\_\_  
(ii) 2:57 pm \_\_\_\_\_  
(iii) 1:20 am \_\_\_\_\_

b) What time is it  $1\frac{1}{2}$  hours after

- (i) 11:20 am \_\_\_\_\_  
(ii) 2:43 am \_\_\_\_\_

c) What is the date 4 days before

- (i) 8th Feb \_\_\_\_\_  
(ii) 2nd Oct. \_\_\_\_\_

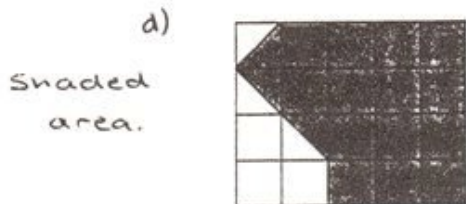
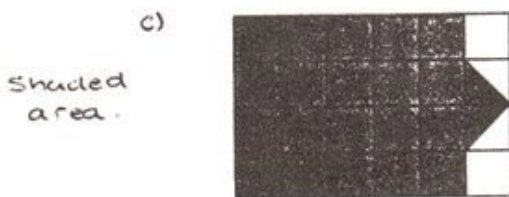
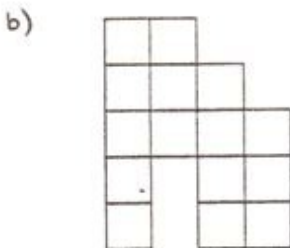
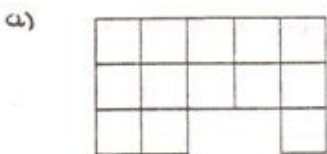
### Question 6 (3 MARKS)

Write these times in 24 hour time

- (i) 2:10 am \_\_\_\_\_  
(ii) 5:12 pm \_\_\_\_\_  
(iii) 12:23 am \_\_\_\_\_

Question 7 (4 marks)

What is the area of each figure in square units?



Question 8 (4 marks)

Complete

1  $\text{cm}^2 =$  \_\_\_\_\_  $\text{mm}^2$

b)  $3.2 \text{ cm}^2 =$  \_\_\_\_\_  $\text{mm}^2$

c)  $1 \text{ ha} =$  \_\_\_\_\_  $\text{m}^2$

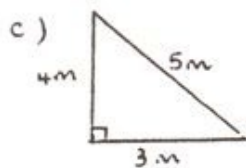
d)  $3.2 \text{ m}^2 =$  \_\_\_\_\_  $\text{mm}^2$

Question 9 (3 MARKS)

Find the areas below

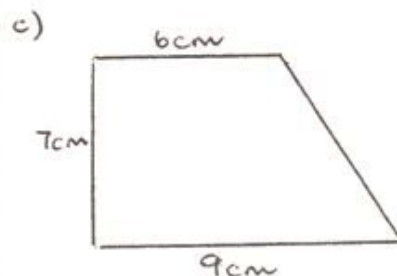
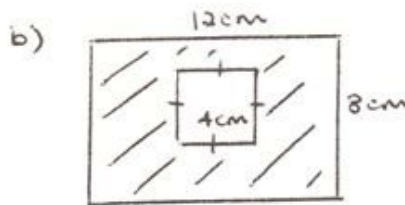
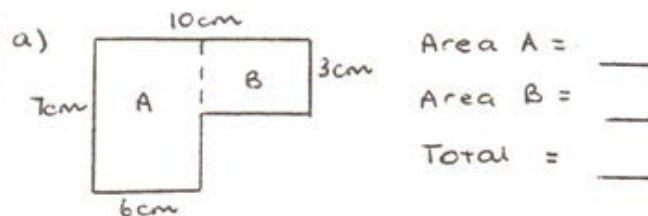
a) a square side 6cm

b) a rectangle 6m by 3m

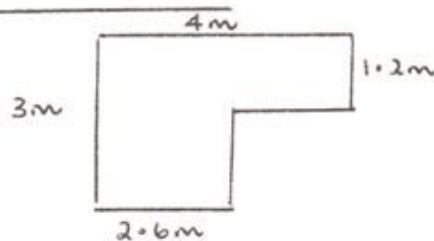


Question 10 (9 MARKS)

Find the areas below by dividing your figure into parts  
SHOW YOUR WORKING



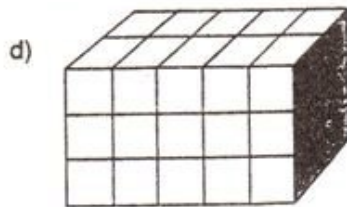
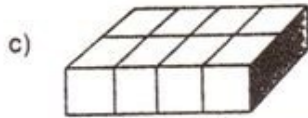
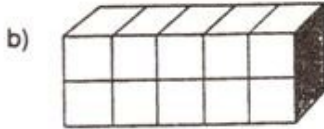
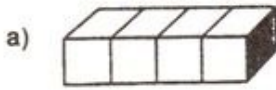
Question 11 (4 MARKS)



The area above is to be carpeted. If the cost of carpet is \$15/ $\text{m}^2$  how much will it cost to carpet this area?  
SHOW YOUR WORKING.

Question 12 (4 MARKS)

What is the volume of each figure in cubic units?



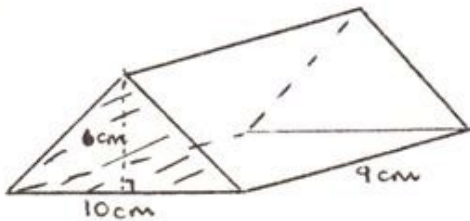
Question 13 (8 MARKS)

Find the volume of a

a) cube side 3cm

b) a rectangular prism with length 6cm breadth 4cm and height 2cm

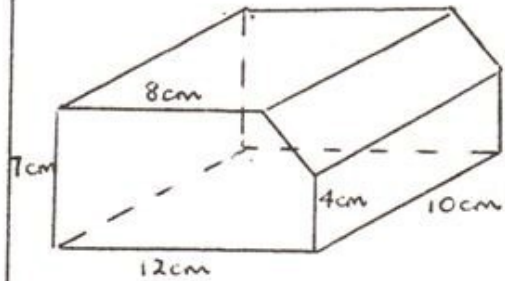
c)



Shaded area = \_\_\_\_\_

Volume = \_\_\_\_\_

(d) NB SHOW WORKING.



Question 14 (5 MARKS)

Complete

a)  $1 \text{ cm}^3 = \underline{\hspace{2cm}} \text{ mL}$

b)  $2000 \text{ mL} = \underline{\hspace{2cm}} \text{ L}$

c)  $18 \text{ mL} = \underline{\hspace{2cm}} \text{ cm}^3$

d)  $1 \text{ L} = \underline{\hspace{2cm}} \text{ cm}^3$

e)  $1 \text{ m}^3 = \underline{\hspace{2cm}} \text{ kL}$

Question 15 (2 MARKS)

What would the capacity be in mLs of a rectangular prism 6cm by 5cm by 3cm?

Question 16 (3 MARKS)

Complete

a)  $2000\text{g} = \underline{\hspace{2cm}} \text{kg}$

b)  $3200\text{kg} = \underline{\hspace{2cm}} \text{t}$

c)  $0.34\text{t} = \underline{\hspace{2cm}} \text{g}$

Question 17 (2 MARKS)

Calculate the missing mass

a) gross mass =  $350\text{g}$

net mass =  $275\text{g}$

containers mass =  $\underline{\hspace{2cm}} \text{g}$

b) gross mass =  $2.7\text{kg}$

containers mass =  $250\text{g}$

net mass =  $\underline{\hspace{2cm}} \text{kg}$

QUESTION 18 (7 MARKS)

PROBLEMS.

1. The volume of a cube is  $64\text{cm}^3$ . What is its surface area (ie what is the total area of all of its faces).

2. The volume of a rectangular prism is  $72\text{cm}^3$ . Its length is  $6\text{cm}$  and breadth is  $4\text{cm}$ .

Find

a) its height

b) its surface area.

3.

The object shown in the diagram is made by glueing together the adjacent faces of six wooden cubes, each having edges of length  $1\text{cm}$ . The total surface area of the object, in square centimetres, is



TOPIC TEST : PERIMETER & AREA

Name: \_\_\_\_\_

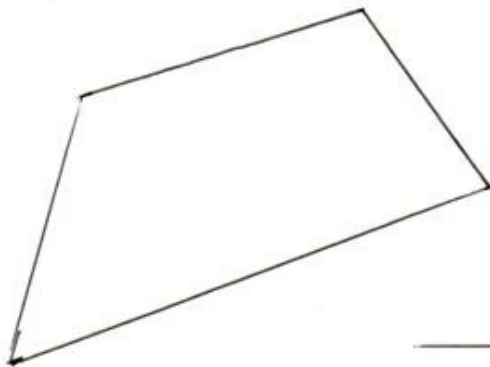
1. Measure the interval below in millimetres



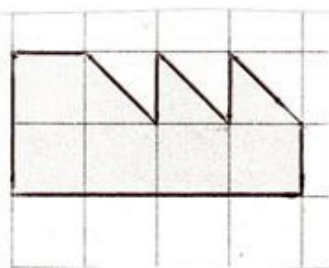
2. From the list below what instrument would you use to measure the following:  
 [trundle wheel, tape measure, ruler, odometer.]

- a) Distance from Eden to Merimbula \_\_\_\_\_
- b) Height of the door \_\_\_\_\_
- c) Width of a textbook \_\_\_\_\_
- d) Length of the oval \_\_\_\_\_

3. Measure the perimeter of the shape below in cms.



4. What is the area of the shape below in cm<sup>2</sup>?



5. Complete

- a) 4cm = \_\_\_\_\_ mm
- b)  $\frac{1}{2}$  m = \_\_\_\_\_ cm
- c) 400m = \_\_\_\_\_ km

6. Draw a diagram below showing the dimensions for 1 hectare in m<sup>2</sup>

7. Find the perimeter of the following (not to scale)

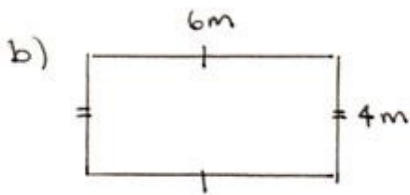
a) \_\_\_\_\_

b) \_\_\_\_\_

c) \_\_\_\_\_

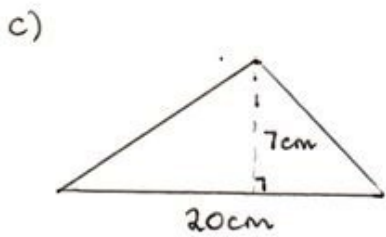
8. Find the area of the following

a) \_\_\_\_\_



\_\_\_\_\_

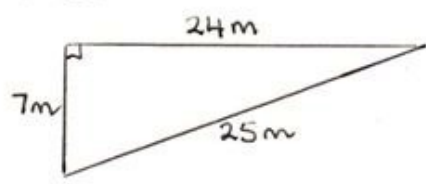
\_\_\_\_\_



\_\_\_\_\_

\_\_\_\_\_

9. Find the perimeter and area below

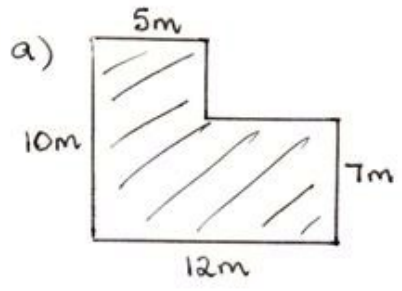


P = \_\_\_\_\_

A = \_\_\_\_\_

\_\_\_\_\_

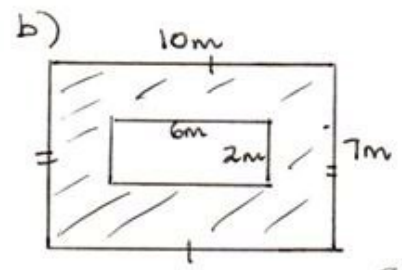
10. Find the shaded areas below. Show your working.



Area A = \_\_\_\_\_

Area B = \_\_\_\_\_

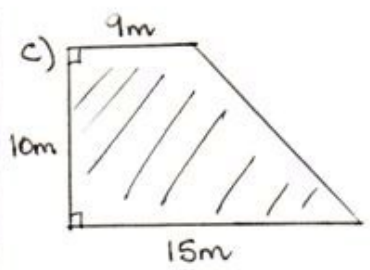
Total =  
area \_\_\_\_\_



Large Rectangle = \_\_\_\_\_

Small Rectangle = \_\_\_\_\_

Shaded Area = \_\_\_\_\_

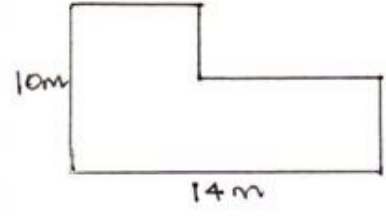


\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

11. Find the perimeter of the shape below



\_\_\_\_\_

12.a) Draw  $1\text{cm}^2$  in the space below

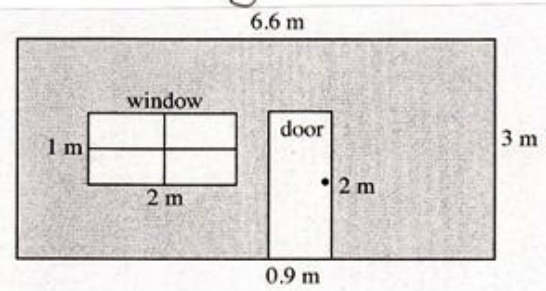
b) Complete  $1\text{cm}^2 = \underline{\hspace{2cm}} \text{mm}^2$

13. A room is  $15\text{m}$  by  $4\text{m}$ . It is to be tiled and the tiles cost  $\$20/\text{m}^2$ .

a) What is the area of the room? \_\_\_\_\_

b) What is the cost of tiling the room? \_\_\_\_\_

14. The wall below needs painting. If one litre of paint covers  $3\text{m}^2$  of wall, how many whole litre should be bought?



\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



## Topic test 8

# Length and area

- Time allowed: 45 minutes.
- Part A: 20 multiple-choice questions (40 marks)
- Part B: 12 free-response questions (60 marks)





Name: \_\_\_\_\_

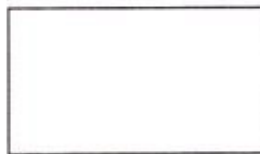
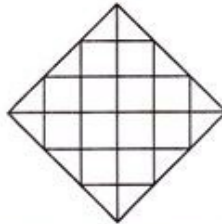
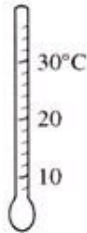
### Part A

20 multiple-choice questions

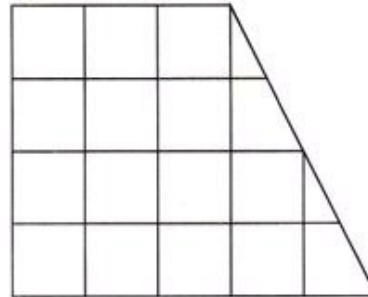
2 marks each: 40 marks

Circle the correct answer each time.

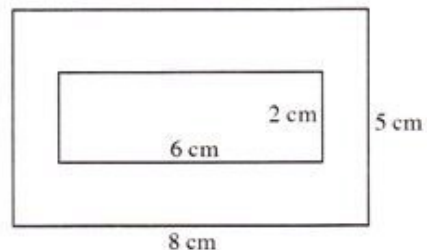
- 1  $37.5 \text{ cm} = ? \text{ mm}$   
 A 3750                      B 375  
 C 3.75                      D 0.375
- 2  $240 \text{ m} = ? \text{ km}$   
 A 2.4                      B 0.24  
 C 24 000                      D 240 000
- 3 Which of the following is the temperature shown on this thermometer?  
 A  $27^\circ\text{C}$   
 B  $25^\circ\text{C}$   
 C  $23^\circ\text{C}$   
 D  $26^\circ\text{C}$
- 4 Which of the following is the area of this figure if each square is 1 square unit?  
 A 9 square units  
 B 18 square units  
 C 25 square units  
 D 16 square units
- 5 This is the actual size of a postage stamp. By measurement and calculation, decide which of the following is its area.  
 A  $10 \text{ cm}^2$   
 B  $7 \text{ cm}^2$   
 C  $5 \text{ cm}^2$   
 D  $11 \text{ cm}^2$
- 6 Which one of these is a square centimetre?  
 A                       B   
 C                       D 



- 7  $1 \text{ m}^2 = ? \text{ cm}^2$   
 A 100                      B 1000  
 C 10 000                      D 100 000
- 8  $1 \text{ ha} = ? \text{ m}^2$   
 A 100                      B 1000  
 C 10 000                      D 1 000 000
- 9 The height of your seat above the ground is closest to which of the following?  
 A 45 mm                      B 450 mm  
 C 450 cm                      D 45 m
- 10 By measuring, decide which of the following is the length of this interval.  
 \_\_\_\_\_  
 A 42 mm                      B 47 mm  
 C 52 mm                      D 57 mm
- 11 Which of the following is the area of this figure?



- A  $14.5 \text{ cm}^2$                       B  $18 \text{ cm}^2$   
 C  $12.5 \text{ cm}^2$                       D  $16 \text{ cm}^2$
- 12 Which of the following is the area of the shaded region?

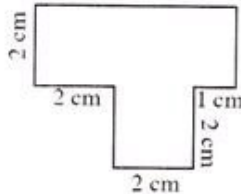


- A  $1 \text{ cm}^2$                       B  $28 \text{ cm}^2$   
 C  $52 \text{ cm}^2$                       D  $14 \text{ cm}^2$

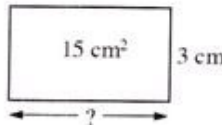
**Topic test 8: Length and area *continued***

- 13 A triangle has two equal sides of length 7 cm and a third side of length 8 cm. Which of the following is its perimeter?  
 A 28 cm                      B 22 cm  
 C 15 cm                        D 23 cm

- 14 Which of the following is the area of this figure?  
 A 16 cm<sup>2</sup>  
 B 20 cm<sup>2</sup>  
 C 40 cm<sup>2</sup>  
 D 14 cm<sup>2</sup>

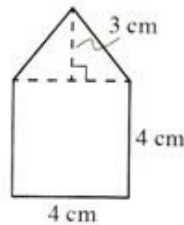


- 15 A rectangle has width 3 cm and area 15 cm<sup>2</sup>. Which of the following is its length?  
 A 4.5 cm                      B 45 cm  
 C 5 cm                         D 12 cm

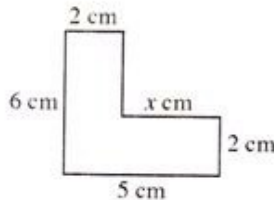


- 16 The length of a classroom's blackboard is closest to which of the following?  
 A 10.5 m                      B 1.5 m  
 C 3.5 m                        D 7 m

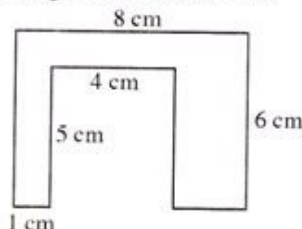
- 17 Which of the following is the area of this figure?  
 A 28 cm<sup>2</sup>  
 B 24 cm<sup>2</sup>  
 C 22 cm<sup>2</sup>  
 D 48 cm<sup>2</sup>



- 18 Which of the following is the value of  $x$  in this diagram?  
 A 3  
 B 4  
 C 5  
 D 2



- 19 Which of the following is the area of the figure in Question 18?  
 A 18 cm<sup>2</sup>                      B 22 cm<sup>2</sup>  
 C 120 cm<sup>2</sup>                    D 60 cm<sup>2</sup>
- 20 Which of the following is the area of this figure?  
 A 24 cm<sup>2</sup>  
 B 22 cm<sup>2</sup>  
 C 32 cm<sup>2</sup>  
 D 28 cm<sup>2</sup>



**Part B**

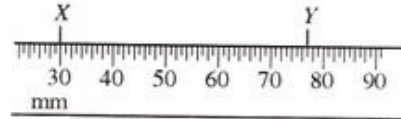
**12 free-response questions**

**60 marks**

(Show your working where appropriate.)

- 21 (2 marks) Write these lengths in order, from shortest to longest:  
**940 cm, 1800 mm, 5.2 m**

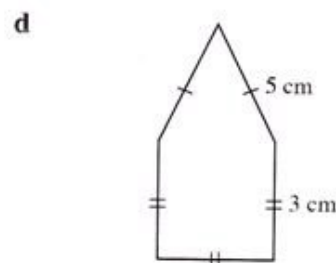
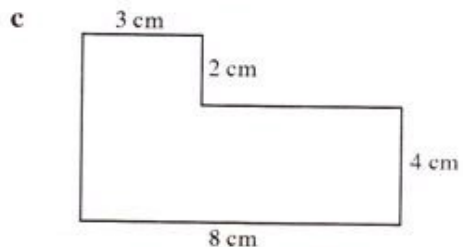
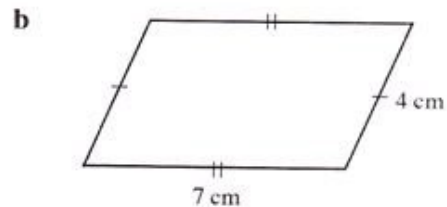
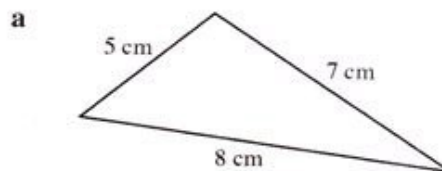
- 22 (2 marks) What is the distance between  $X$  and  $Y$  on this ruler?



- 23 (6 marks) Complete:

- a 3.5 m = \_\_\_\_\_ cm  
 b 5.9 km = \_\_\_\_\_ m  
 c 4150 cm = \_\_\_\_\_ m  
 d 860 mm = \_\_\_\_\_ m

- 24 (8 marks) Find the perimeter of each of these figures.

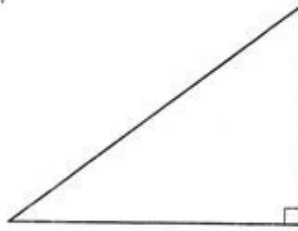


**Topic test 8: Length and area *continued***

25 (4 marks) By measurement and calculation, find this triangle's:

a perimeter

b area.



26 (6 marks)

a What amount of water is in this measuring cup, in millilitres?

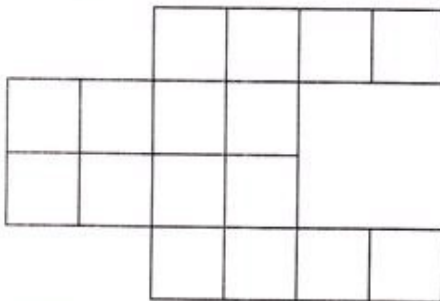
b What is the size of one unit on the scale of this measuring cup?

c What are the limits of accuracy of this measuring cup?

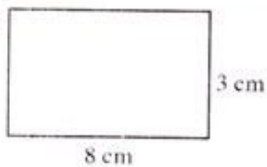


27 (8 marks) Calculate the area of each figure.

a



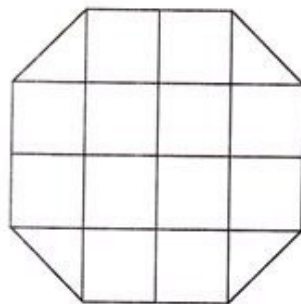
b



c



d



28 (4 marks) Complete:

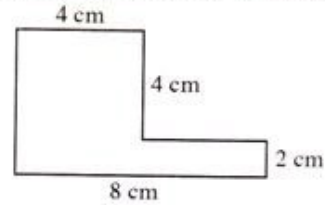
(a)  $6400 \text{ mm}^2 = \underline{\hspace{2cm}} \text{ cm}^2$

(b)  $2.75 \text{ km}^2 = \underline{\hspace{2cm}} \text{ m}^2$

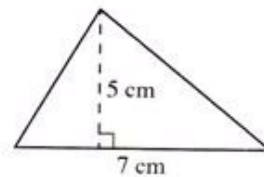
29 (2 marks) If a square has a perimeter of 36 m, what is the length of one of its sides?

30 (9 marks) Calculate the area of each figure.

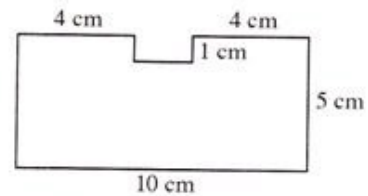
a



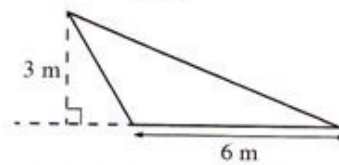
b



c

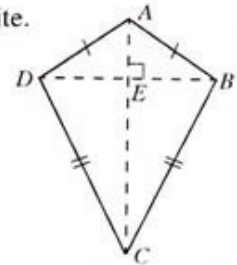


d

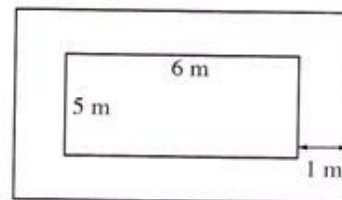


31 (4 marks)  $ABCD$  is a kite.

If  $DE = EB = 3 \text{ cm}$  and  $AC = 7 \text{ cm}$ , then calculate the area of the kite.



32 (5 marks) A garden measuring 6 m by 5 m has a pathway 1 m wide around its border.



a Calculate the total area of the pathway.

b If the pathway is made from square concrete slabs 0.5 m wide, how many slabs are needed?

**This is the end of the test.**

**(Use the back for extra working space.)**