PEI CHUN PUBLIC SCHOOL

PRELIMINARY EXAMINATION , 2007

MATHEMATICS

BOOKLET A

Name : _____ (   )

Class : Primary 6

Date : 1 August 2007

Total Time For Booklets A & B : 2 h 15 min

INSTRUCTIONS TO CANDIDATES

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.

FOLLOW ALL INSTRUCTIONS CAREFULLY.

ANSWER ALL THE QUESTIONS.

Questions 1 to 10 carry 1 mark each. Questions 11 to 15 carry 2 marks each.

For each question, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). **Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet.**

(20 marks)

1. 800 000 + 6000 + 1 = _____

   (1) 806 001

   (2) 806 010

   (3) 860 001

   (4) 860 010   (   )

2. The best estimate of 7490 ÷ 24 is _____.

   (1) 3120

   (2) 312

   (3) 31.2

   (4) 3.12   (   )

3. What is the missing number in the box?

   $0.0502 \times \boxed{} = 5.02$

   (1) 10 000

   (2) 1000

   (3) 100

   (4) 10   (   )

4. What is the missing number in the box?

   $2 \text{ kg} + 20 \text{ g} = \boxed{} \text{ kg}$

   (1) 2020

   (2) 20.2

   (3) 2.2

   (4) 2.02   (   )

5. 4 boys share 6 pizzas equally. What fraction of a pizza does each boy get?
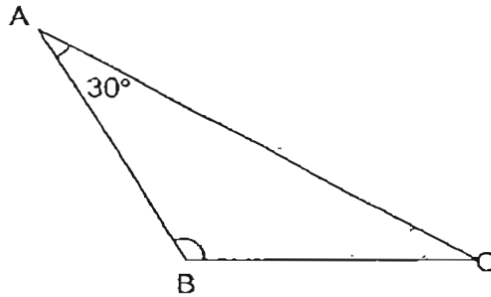
    (1) $\dfrac{1}{6}$

    (2) $\dfrac{2}{3}$

    (3) $\dfrac{5}{4}$

    (4) $\dfrac{3}{2}$ (   )

6. ABC is an isosceles triangle and AB = BC.

    Find ∠ABC.

    (1)   30°

    (2)   75°

    (3)   120°

    (4)   150°   (   )

7. The average of 8 and y is _____.

    (1) $4 + y$

    (2) $8 + y$

    (3) $\dfrac{8y}{2}$

    (4) $\dfrac{8+y}{2}$ (   )

8. The graph below shows the amount of petrol left in a car and the distance it travelled.
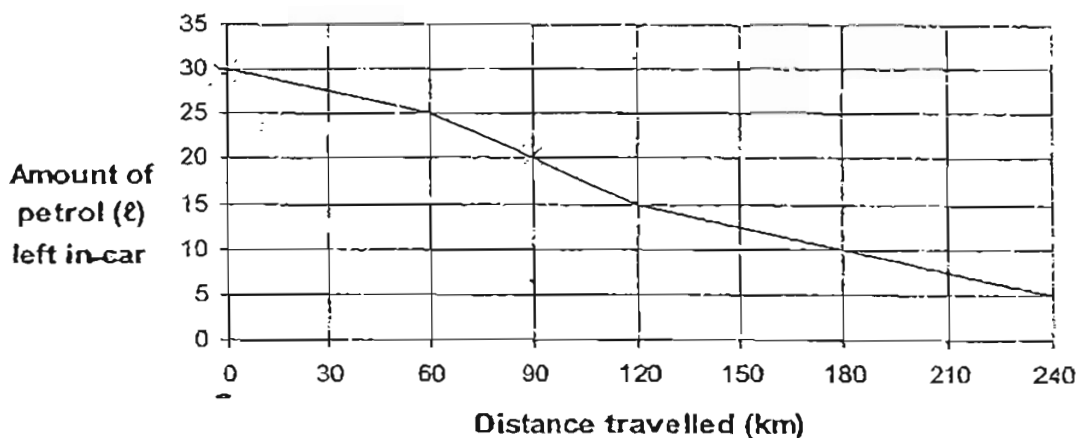
How much petrol was used for the first 90 km travelled?

(1) 10 ℓ

(2) 15 ℓ

(3) 20 ℓ

(4) 90 ℓ   (   ).

9. A printer prints documents at a rate of 120 pages in 15 minutes. At this rate, how many pages does the printer print in 1 hour?

(1) 8

(2) 32

(3) 480

(4) 800   (   ).

10. Danisa bought $\frac{5}{6}$ kg of chestnuts. She roasted $\frac{3}{10}$ of them. How many kg of chestnuts did she roast?

(1) $\frac{1}{4}$ kg

(2) $\frac{1}{20}$ kg

(3) $\frac{7}{12}$ kg

142

(4) $\frac{8}{15}$ kg   (   )
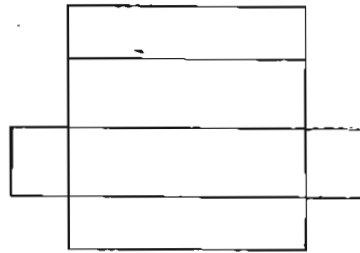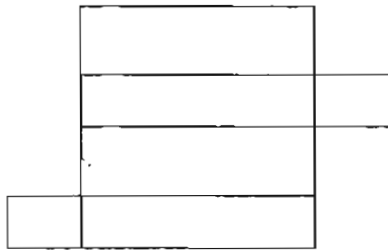
11.   This figure shows a cuboid.
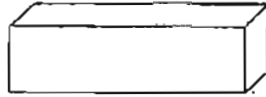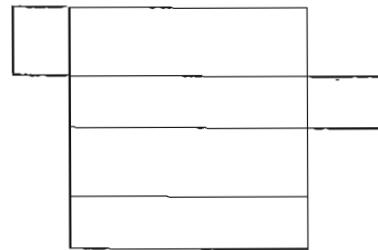

Which of the following are nets of the cuboid?
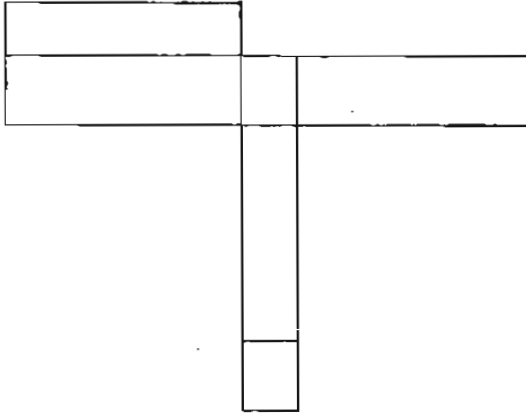
A

B

C

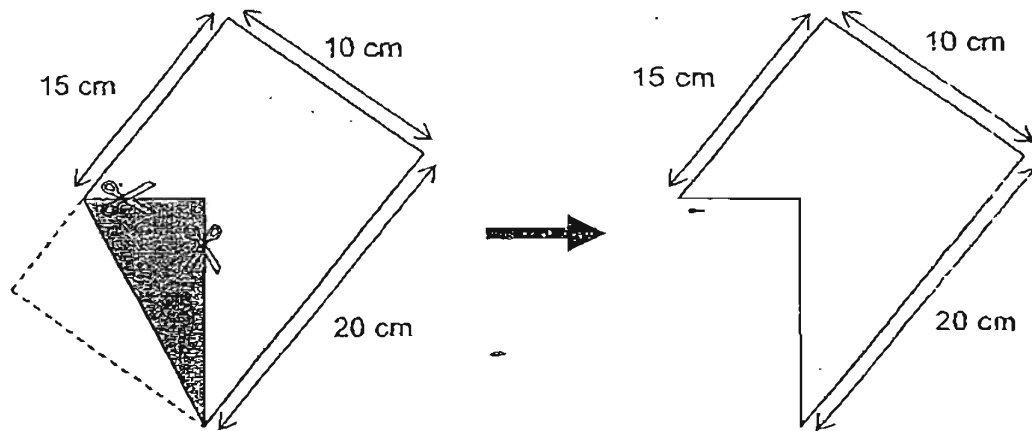D

(1)   A and B

(2)   A and C

(3)   B and C

(4)   C and D   (   )

12. A rectangular piece of paper, grey on one side, is folded and then cut as shown.

Find the area of the remaining piece of paper.

(1) 175 cm²

(2) 150 cm²

(3) 125 cm²

(4) 100 cm²   (   )

13. Fatimah has a certain length of ribbon. She cut off $\frac{5}{12}$ of it and then another $\frac{3}{7}$ of it. What fraction of the length of the ribbon was left?

(1) $\frac{13}{84}$

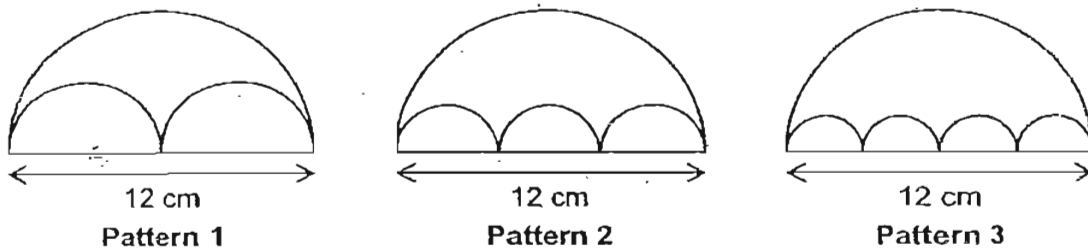(2) $\frac{71}{84}$

(3) $\frac{1}{3}$

(4) $\frac{1}{4}$ (   )

144

14. A cube has a volume of 64 cm³. When the length of each edge of the cube is doubled, what will the volume of the cube be?

(1) 512 cm³

(2) 256 cm³

(3) 128 cm³

(4) 8 cm³   (   )

15. The following patterns are made up of semicircles.

| 12 cm | 12 cm | 12 cm |
| Pattern 1 | Pattern 2 | Pattern 3 |

Pattern	Total area of small semicircles : Area of large semicircle
1	1 : 2
2	1 : 3
3	1 : 4

What is the total area of the small semicircles in Pattern 5 in terms of π?

(1) 7.2π cm²

(2) 3.6π cm²

(3) 3π cm²

(4) 6π cm²   (   )

/.

End of Booklet A

PEI CHUN PUBLIC SCHOOL

PRELIMINARY EXAMINATION 1, 2007

MATHEMATICS

BOOKLET B

Name : _____ (   )

Class : Primary 6 __

Date : 1 August 2007

Total Time For Booklets A & B : 2 h 15 min

Booklet A	20
Booklet B	80
T O T A L	100

INSTRUCTIONS TO CANDIDATES

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.

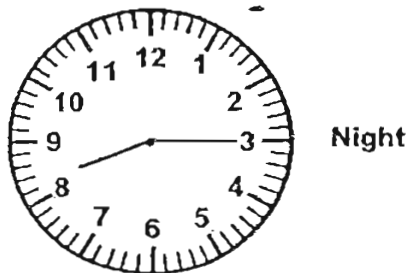FOLLOW ALL INSTRUCTIONS CAREFULLY.

ANSWER ALL THE QUESTIONS.

Questions 16 to 25 carry 1 mark each. Write your answers in the spaces provided.
For questions which require units, give your answers in the units stated.   (10 marks)

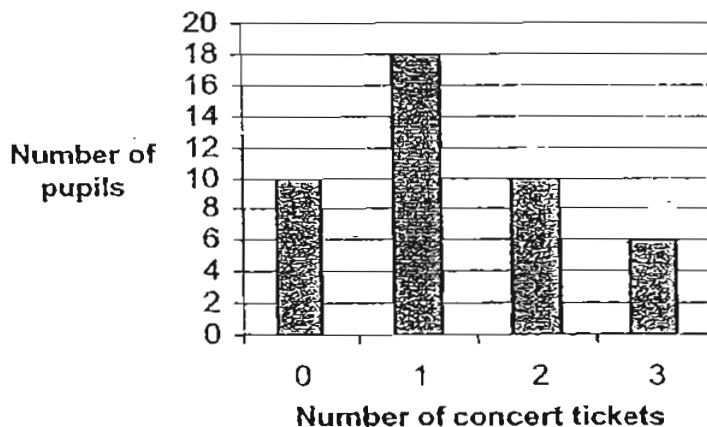16.   Find the value of $6 \times (11 - 5) + 14 \div 2$.

Ans : _____ _____

17.   What is the time shown on the clock face? Give your answer using the 24-hour clock.

Night

Ans : _____

18.   The bar graph below shows the number of concert tickets bought by a class of 44 pupils.

Number of pupils

Number of concert tickets

What was the total number of concert tickets bought by the pupils of the class?
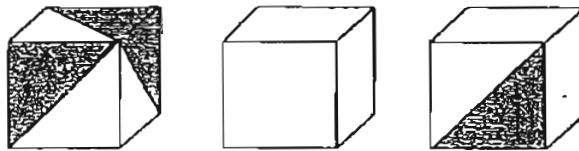
Ans : _____

SCORE   /47

MA / P6 / PL1 / 2007   Page 1 of 17   (Go on to the next page)

19. Find ∠y.
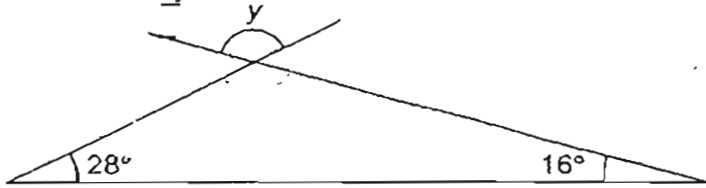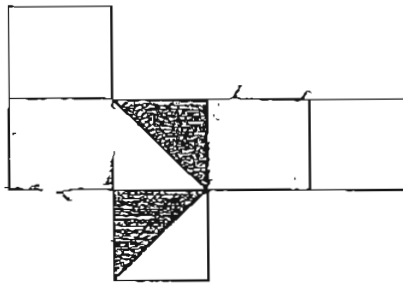

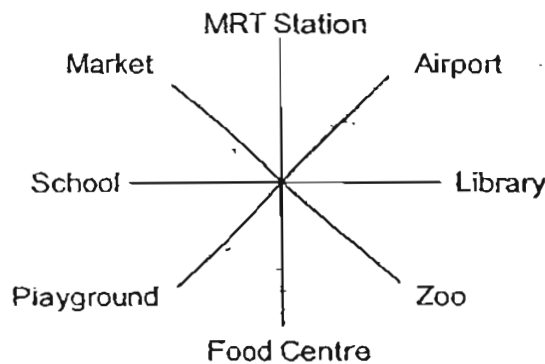Ans : _____ °

20. The figures below show 3 views of the same cube.

Shade the net below so that it is the net of the cube shown.

21. I had $3n at first. My mother then gave me $4n. If n = 60, how much money do I have now?

Ans : $_____

22.

Ahmad is facing the food centre. When he turns 45° clockwise and then 135° anti-clockwise, where will he be facing?

Ans : _____

SCORE

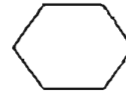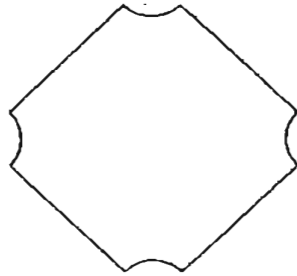23. Which of the following shape(s) can tessellate?

Shapes

A   B   C   D
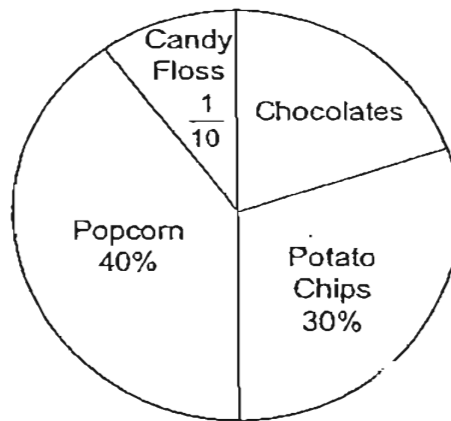
Ans : _____

24. How many lines of symmetry does the figure have?

Ans : _____

25. The pie chart below shows the favourite snacks of a group of children.

Candy Floss $\frac{1}{10}$

Chocolates

Popcorn 40%

Potato Chips 30%

What fraction of the children chose chocolates as their favourite snack?
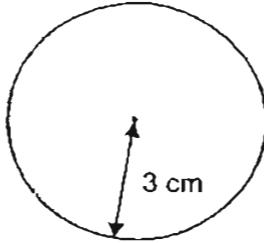(Give your answer in its simplest form.)

Ans : _____

SCORE

Questions **26** to **35** carry 2 marks each. Show your working clearly in the space below each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. **(20 marks)**

26. Find the circumference of the circle. (Take $\pi = 3.14$)

3 cm

Ans : _____ cm

27. Ghandi scored an average of 75 marks for 2 tests. How many marks must he score in the third test so that his average score for the 3 tests is 80 marks?

Ans : _____

28. The table below shows the postage charges for sending parcels to Countries S and T.

Country	Mass step not over 200 g	Per additional 200 g or part thereof
S	$6	$1
T	$10	$2

Mr Qian wants to send a parcel weighing 350 g to Country S and another parcel weighing 150 g to Country T. How much does he have to pay for the postage?

Ans : $ _____

SCORE

29. A bus took 4 h to travel from Town M to Town N at an average speed of 54 km/h. A car took 1 h less than the bus for the same journey. What was the average speed of the car in km/h?
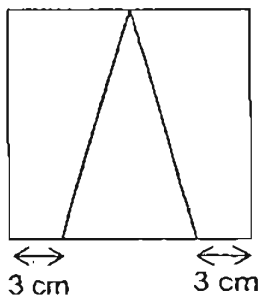
Ans : _____ km/h

30. In a school, 80% of the teachers are females and the rest are males. How many percent more female teachers than male teachers are there in the school?
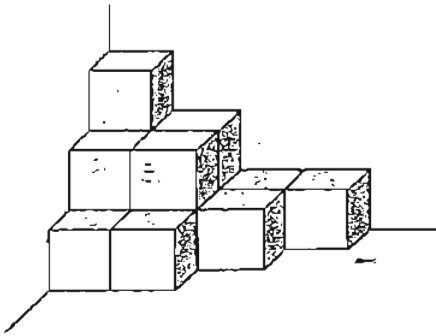
Ans : _____ %

31. The figure below shows a triangle in a square. The perimeter of the square is 52 cm. Find the area of the triangle.

←→
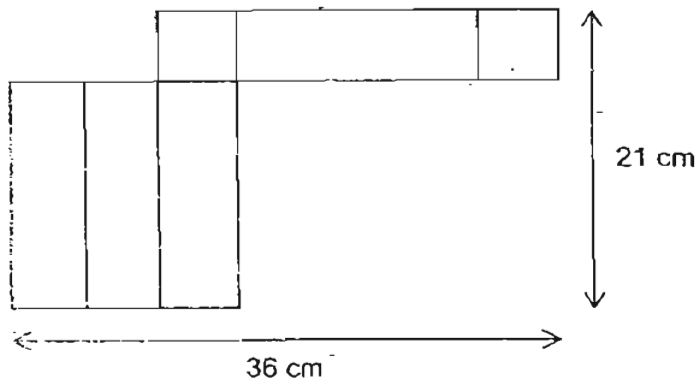3 cm   ←→
              3 cm

Ans : _____ cm²

SCORE

32. The solid shown below is made up of 2-cm cubes.

How many **more** 2-cm cubes are needed to make the solid into an 8-cm cube?

Ans : _____

33. The diagram below shows a net of a cuboid.

21 cm

36 cm

Find the volume of the cuboid.

Ans : _____ cm^3

152

SCORE

34. Wahid, Xavier, Yati and Ziyi have to pay the same amount of class funds. Yati forgot to bring money so her 3 other classmates paid for her first. The ratio of the total amount that Ziyi paid to the total amount that Wahid and Xavier paid is 3 : 7. If Yati returned $6 to Ziyi, find the amount each pupil paid for the class funds.

Ans : $_____

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35. There were 140 apples and pears in a box. $\frac{1}{2}$ of the apples and $\frac{2}{3}$ of the pears were eaten. In the end, there were 68 of these fruits left. How many apples were eaten?
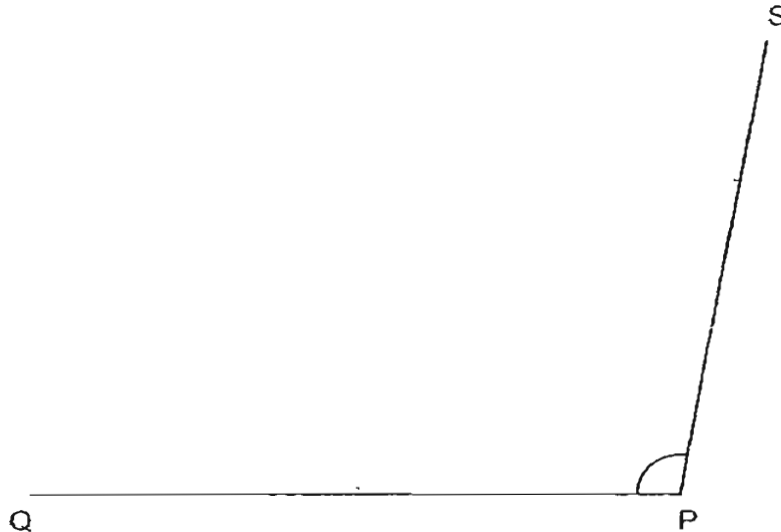
Ans : _____

SCORE

For questions 36 to 48, show your working clearly in the space below each question and write your answers in the spaces provided.
The number of marks available is shown in brackets [   ] at the end of each question or part-question.   (Total: 50 marks)

36.   The figure below shows two straight lines PQ and PS.

(a)   Draw two lines QR and RS such that QR // PS and RS // PQ.   [2]

(b)   Measure and write down the size of ∠QPS.

Ans : _____ [1]

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37.   Mrs Durai wants to buy bookmarks for 3 classes of pupils. There are 35 pupils in each class. For every 4 bookmarks she buys, she gets another one free.

(a)   How many bookmarks does she need if each pupil gets 1 bookmark?

(b)   4 bookmarks cost $2. What is the least amount she needs to pay?

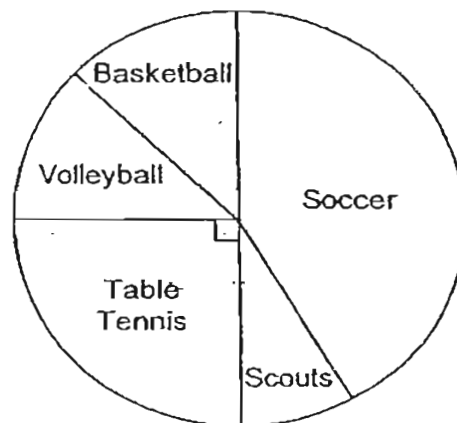Ans : (a) _____ [1]

(b) _____ [2]

SCORE

38. A rectangular piece of cardboard measures 17 cm by 12 cm. Sushila cuts the greatest number of rectangular pieces, each measuring 3 cm by 2 cm, from the cardboard. What is the total area of all the pieces cut?

Ans : _____ [3]

39. A group of pupils were asked to choose a co-curricular activity. The pie chart represents their choices. The same of number of pupils chose Basketball and Volleyball.

(a) 60 pupils chose Table Tennis. How many pupils chose Basketball?

(b) The ratio of the number of pupils who chose Basketball to the number of pupils who chose Soccer is 3 : 10. How many pupils chose Scouts?

Ans : (a) _____ [1]

(b) _____ [2]

SCORE

40.   Kavita had 50% fewer erasers than Mark. After Mark gave 15 of his erasers to
      Kavita, Kavita had 40% fewer erasers than Mark. How many erasers did Kavita
      have at first?

                                              Ans : _____ [3]

41.   The ratio of the number of Andrew's stickers to the number of Eunice's stickers
      was 1 : 5. Then their mother gave Eunice 12 more stickers and Andrew 5 more
      stickers. The ratio of the number of Andrew's stickers to the number of Eunice's
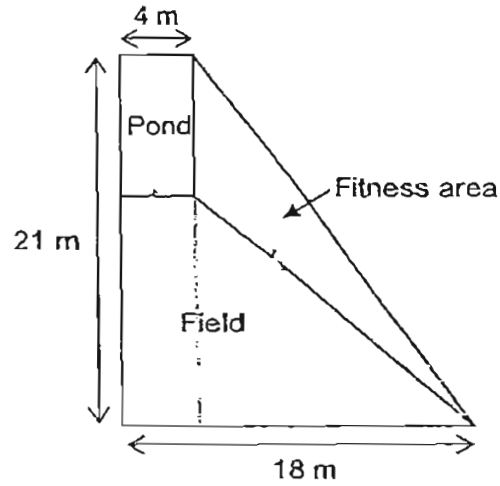   stickers became 1 : 4. How many stickers did Andrew have in the end?

                                              Ans : _____ [3]

                                                                    SCORE

42. The figure below shows a park which is made up of a triangular fitness area, a rectangular pond and a field in the shape of a trapezium. The length of the pond is twice its breadth.

(a) The cost of fencing material is $3 per metre. How much will it cost to fence up the pond?

(b) What is the area of the park?

Ans : (a) _____ [2]

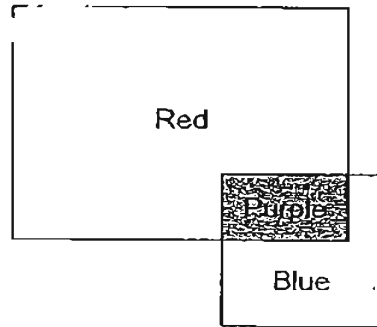(b) _____ [2]

43. Taufik arranged a rectangle and a square and painted them in three colours as
shown in the figure below. The ratio of the area of the rectangle to that of the
square is 3 : 1. The ratio of the area of the red part to that of the blue part is 4 : 1.
The length of the square is 9 cm.

(a) What is the area of the purple part?

(b) What is the ratio of the area of the purple part to that of the figure?
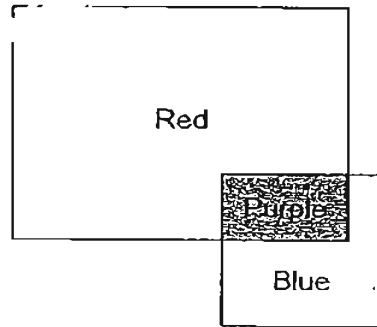

Red

Purple

Blue

Ans : (a) _____ _____ [3]

(b) _____ [1]

SCORE

43. Taufik arranged a rectangle and a square and painted them in three colours as shown in the figure below. The ratio of the area of the rectangle to that of the square is 3 : 1. The ratio of the area of the red part to that of the blue part is 4 : 1. The length of the square is 9 cm.

(a) What is the area of the purple part?

(b) What is the ratio of the area of the purple part to that of the figure?

```
    ┌ ─   ─ ─ ─ ─ ─ ─ ─ ─ ┐
    │                      │
    │        Red           │
    │              ┌───────┼───┐
    │              │Purple │   │
    └──────────────┼───────┘   │
                   │  Blue     │
                   └───────────┘
```

Ans : (a) _____ ⟋ [3]

(b) _____ [1]

SCORE
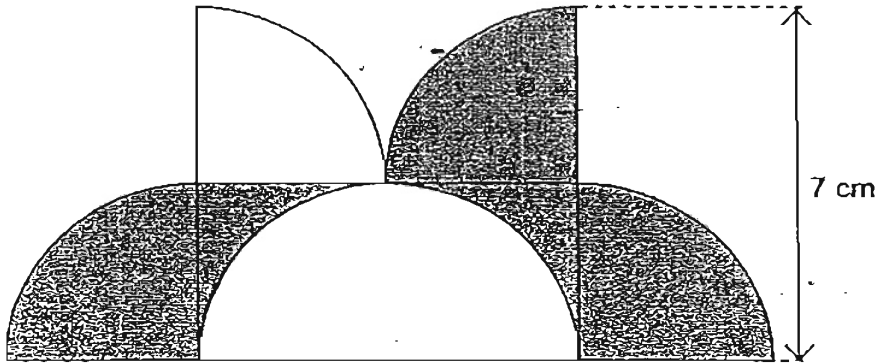
44. The figure below is made up of a rectangle, a semi-circle and 4 identical quadrants.

    (a)   What is the total area of the shaded parts?

    (b)   What is the perimeter of the **whole figure**?

    (Take $\pi = \dfrac{22}{7}$)

7 cm

Ans : (a) _____ [2]

        (b) _____ [2]

SCORE

45. 400 people took part in a camp. 73 of them were adults and the rest were children. $\frac{2}{5}$ of the boys and $\frac{1}{4}$ of the girls were lower primary pupils while the rest of them were upper primary pupils. There were 9 more upper primary girls than upper primary boys.

(a) How many upper primary pupils were there?

(b) What percentage of the people who took part in the camp were girls?
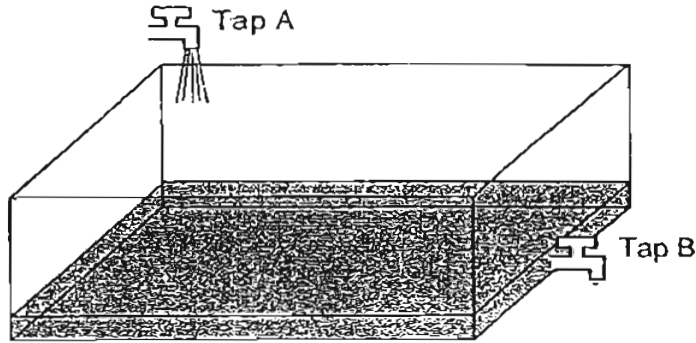
Ans : (a) __ _____ [3]

(b) _____ [2]

SCORE

46. A rectangular tank measuring 60 cm by 40 cm by 20 cm was $\frac{1}{6}$ filled with water.

At 08-00, Tap A with water flowing out at a rate of 3 ℓ per minute was turned on.
At 08 02, Tap B was turned on to drain water out of the container at a fixed rate.
At 08 13, the tank was 75% filled with water. At what time would the tank be filled to the brim? (1 ℓ = 1000 cm³)

Ans : _____ [5]

SCORE

47. Najip, Kumar and Gurmit started jogging at the same time from the same starting-point round a circular track. Najip and Kumar jogged in a clockwise direction and Gurmit jogged in an anti-clockwise direction. Gurmit took 5 minutes to complete each round. Gurmit met Najip after every 3 minutes. Gurmit met Kumar after every 2 minutes. The jogging speed of each person remained the same throughout.

(a) What was the ratio of Gurmit's speed to Najip's speed to Kumar's speed?

(b) When Gurmit and Najip met again at the starting-point after 15 minutes, Kumar had already jogged 3.6 km. What is the circumference of the circular track?

Ans : (a) _____ [3]

(b) _____ [2]

SCORE

48. Mr Lim spent $1496 on some comics and dictionaries altogether. The number of comics bought to the number of dictionaries bought was in the ratio 3 : 2. A dictionary cost $4 more than a comic. The total cost of the comics was 20% more than the total cost of the dictionaries. Find the cost of a dictionary.
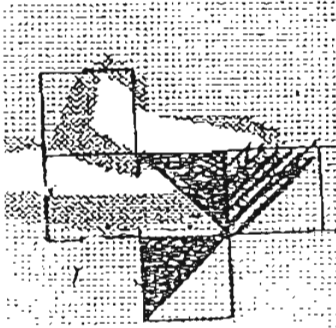
Ans : _____ [5]

End of Booklet B

SCORE

Q1	Q2	Q3	Q4	Q5
1	2	3	4	4
Q6	Q7	Q8	Q9	Q10
3	4	1	3	1
Q11	Q12	Q13	Q14	Q15
4	2	1	1	3

16. 43

17. 2015

18. 56 tickets

19. 136°

20.

21. $420

22. Library

23. A and D

24. 4 tines

25. $\frac{1}{5}$

26. 18.84cm

27. 90 marks

28. $17

29. 72km/h

30. 300%

31. 45.5cm²

32. 50 cubes

33. 400cm³

34. $30

35. 64 apples

36a.
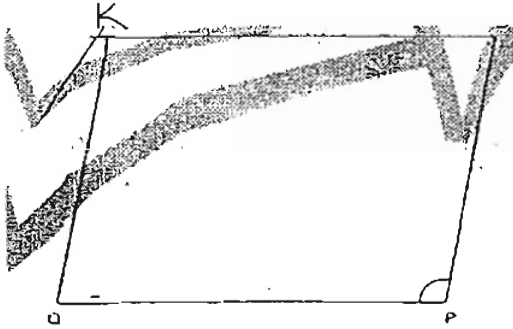
Measure and write down the size of ∠QPS

34a. 105 bookmarks

36b. 100°

37b. $42

38. 204cm²

39a. 30 pupils
39b. 20 pupils

40. 120 erasers

41. 13 stickers

42a. $72
42b. 231m²

43a. 27cm²
43b. 1 : 11

44a. 34.125cm²
44b. 43cm

45a. 219 pupils
45b. 38%

46. 08 19

47a. 6 : 4 : 9
47b. 0.8km

48. $20