Name : _____ (   )   Index Number   ☐☐☐☐☐ — ☐ —

Class : Primary 6 SY / C / G / SE / P

_____

SINGAPORE CHINESE GIRLS' SCHOOL (PRIMARY)

PRELIMINARY EXAMINATION 2007

MATHEMATICS

BOOKLET A

15 Questions

20 Marks

Total Time For Booklets A and 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 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.

1. What is the missing number in the box?

    $160\ 058 = 100\ 000 +$ ⬚ $+ 50 + 8$

    (1) 60
    (2) 600
    (3) 6 000
    (4) 60 000

2. Which one of the following numbers is nearest to 10?

    (1) 9.01
    (2) 9.91
    (3) 10.01
    (4) 10.091

3. Which one of the following is the best estimate for $49.86 \div 97$?

    (1) 5.0
    (2) 0.5
    (3) 0.05
    (4) 0.005
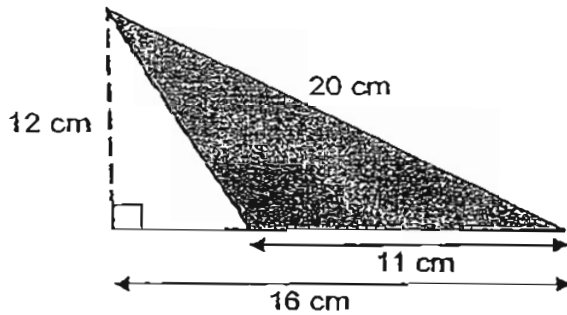
4. Find the value of $28 - 12 \div 4 \times 3 + 2$.

    (1) 14
    (2) 17
    (3) 21
    (4) 29
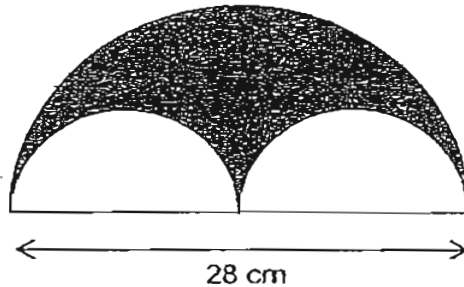
5. Which one of the following is the same as 10 h 15 min?

    (1) 75 min
    (2) 115 min
    (3) 615 min
    (4) 1015 min

6.   What is the area of the shaded triangle?

    20 cm

12 cm

11 cm

16 cm

  (1)   66 cm^2
  (2)   96 cm^2
  (3)   110 cm^2
  (4)   132 cm^2

7.   The figure is made up of a big semicircle and two identical small semicircles. Find the perimeter of the shaded part of the figure. (Take $\pi = \dfrac{22}{7}$)
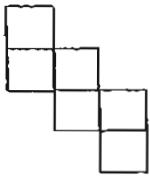

28 cm

  (1)   44 cm
  (2)   66 cm
  (3)   72 cm
  (4)   88 cm

8.   Mr Tan takes 5 minutes to saw a log into 2 equal pieces.
How long would he take to saw the same log into 12 equal pieces?

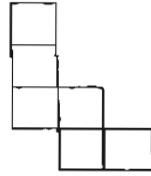 (1)   12 min
  (2)   30 min
  (3)   55 min
  (4)   60 min

9.   Which of the following can be the net of a cube?

A   B   C   D

(1)   A
(2)   B
(3)   C
(4)   D

10.   Mrs Tan bought 5 pens and 3 files. Each pen cost $a and each file cost $b.
      How much did she pay altogether?

(1) $(a + b)

(2) $(a − b)

(3) $(3a + 5b)

(4) $(5a + 3b)

11.   John bought as many 20-cent stamps as 50-cent stamps.
      He paid $7 for all the stamps.
      How many stamps did he buy altogether?

(1)   10
(2)   20
(3)   30
(4)   40

1⟶6

12. Which one of the following is greater than $\dfrac{1}{3}$?

    (1) $\dfrac{2}{7}$

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

    (3) $\dfrac{3}{11}$
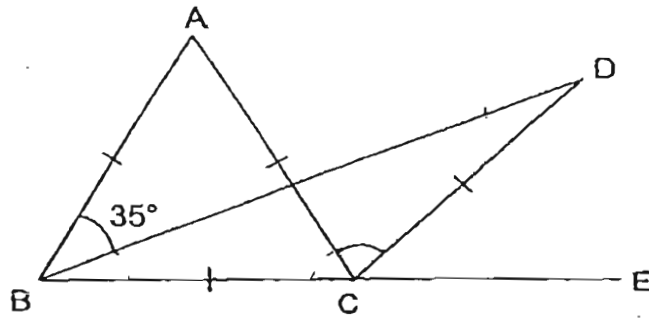
    (4) $\dfrac{4}{13}$

13. The pie chart shows how Mrs Lim used her monthly salary.
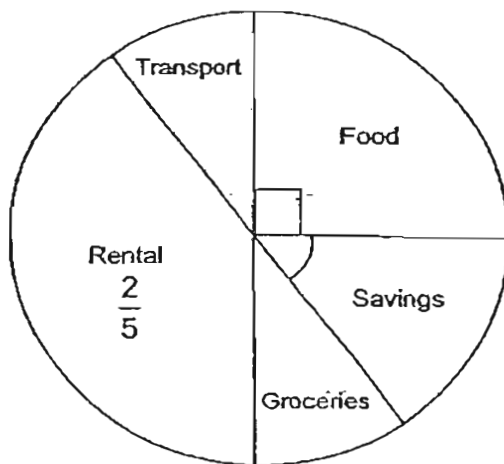
What percentage of her monthly salary did she save?

    (1)   15%
    (2)   20%
    (3)   54%
    (4)   85%

14. In the figure, not drawn to scale, ABC is an equilateral triangle, BCD is an isosceles triangle and BCE is a straight line. Find ∠ACD.

A

D

35°

B   C   E

(1)   50°
(2)   70°
(3)   85°
(4)   95°

15. Meiling gave 20% of her salary to her mother. She spent 50% of the remainder and saved the rest. What percentage of her money did she save?

(1)   30%
(2)   40%
(3)   50%
(4)   60%

Name : _____ (   )   Index Number

Class : Primary 6 SY / C / G / SB / P

SINGAPORE CHINESE GIRLS' SCHOOL (PRIMARY)

PRELIMINARY EXAMINATION 2007

MATHEMATICS

BOOKLET B

33 Questions

80 Marks

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

Questions 16 to 25 carry 1 mark each. Questions 26 to 35 carry 2 marks each.
For each question, write your answer in the space provided.
Give your answers in the units stated.

16.   A number when rounded off to the nearest thousand is 870 000.

What is the greatest possible number?

Ans: _____

17.   Write 2 tens 7 hundredths and 6 thousandths as a decimal.

Ans: _____

18.   What fraction of the ~~rectangle~~ figure is shaded?
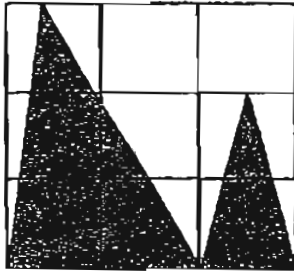
Ans: _____

19.   Express $2\frac{3}{5}$ km in metres.

Ans: _____ m

4
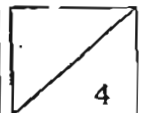
20. Look at the reading indicated on the weighing scale.

What is the mass of the cabbage?

(Give your answer in kg and g.)

Ans: _____ kg, _____ g

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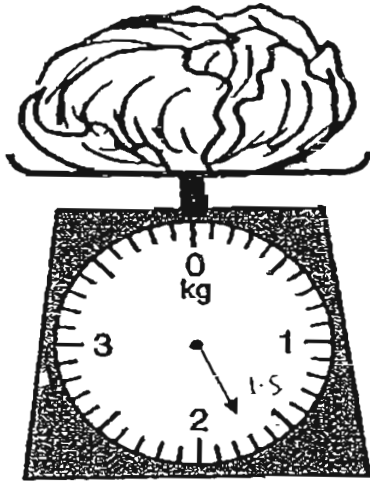
21. The sum of 8 numbers is 416. What is the average of the numbers?

Ans:_____

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22. A muffin cost twice as much as a pancake. Jane spent $\frac{1}{4}$ of her money on

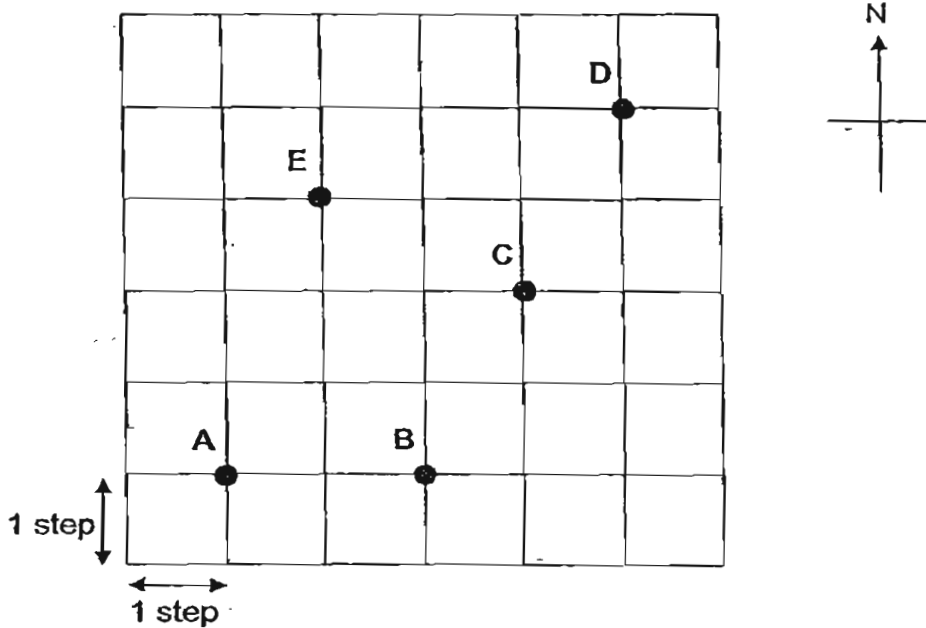5 muffins. How many pancakes could she buy with the rest of her money?

Ans:_____

3
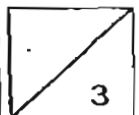
23. A motorist travels 65 km in 30 minutes.

Express his speed in km/h.

Ans: _____ km/h

24. Study the diagram and answer the following questions.

Huimin was at a certain position. She walked 3 steps due west,

2 steps due south and then 2 steps due east. She ended at Position C.

Where was her starting position?

Ans: _____

25. Sam and Tom shared some marbles in the ratio of 3 : 4. In a game, Tom
lost half of his marbles to Sam. What was the ratio of the number of marbles
Sam had to the number of marbles Tom had after the game?

Ans: _____

3
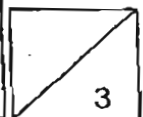
Questions 26 to 35 carry 2 marks each. Show your working clearly in the
space below each question and write your answers in the spaces provided.
For questions which require units, give your answers in the units stated.

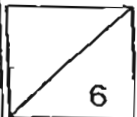26.   Express $2\frac{1}{2}\%$ as a decimal.

Ans: _____

27.   Deming bought some files for $48 at a discount of 20%.

Given the discount, he was able to buy 3 more files at the usual price.

What was the usual price of each file?

Ans: $ _____

28.   The figure shows a solid leaning against two walls. The solid is made up of
some 1-cm cubes. Find the volume of the solid.

Ans: _____ cm³

6
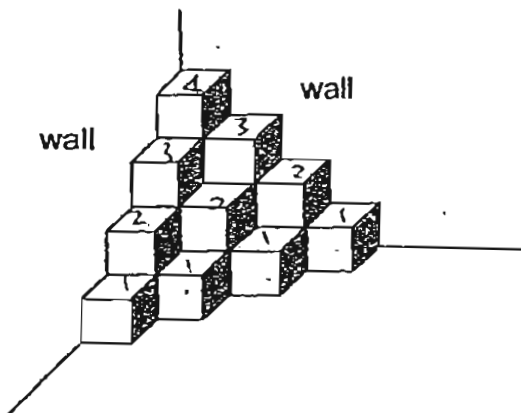
29. A rectangular tank, 40 cm long, 35 cm wide and 25 cm high, contained 21 litres of water. What is the height of the water level in the tank?

Ans: _____ cm

30. Mrs Chua had just enough money to buy 4 kg of crabs and 3 kg of prawns. However, she bought 3 kg of crabs and 4 kg of prawns and had $4.50 left. If she exchanged the 3 kg of crabs with 3 kg of prawns, how much money would she have left?
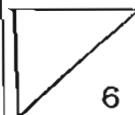
Ans:$ _____

31. The pie chart shows the amount of money donated by four Primary Six classes. The total amount collected was $500.
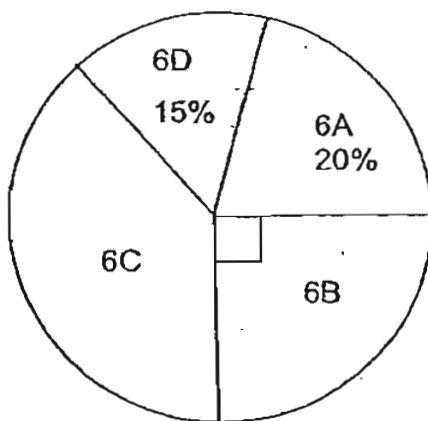
How much money was collected by Primary 6C?

Ans: $ _____

6

32. In the figure, O is the centre of the circle and SP is parallel to OQ.

Find $\angle x$.

Ans: _____ °

33. 8 workers can paint a block of flats in 12 hours. At this rate, how many workers are needed to paint the block of flats in 4 hours?
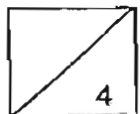
Ans: _____

4
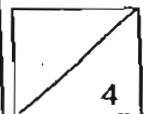
34. The ratio of the number of passengers in Train A to that in Train B is 3 : 2. When 80 passengers alighted from Train A, the ratio became 7 : 6. How many passengers remained in Train A?

Ans: _____

---

35. Mr. Tan had 200 apples and oranges. $\frac{1}{3}$ of the apples and $\frac{1}{4}$ of the oranges were rotten. He threw away 60 rotten fruits altogether. How many rotten oranges were there?

Ans: _____

4

Write your answers to questions 36 to 48 in the spaces provided. For each question, show your working clearly in the space provided. The number of marks available is shown in brackets at the end of each question or part-question.

Do not write in this column

36. (a)   Jane is $4k$ years old. Her sister is 3 years older than her.

Express their total age in terms of k.

(b)   What is the ratio of Jane's age to her sister's when $k = 9$?

(Express your answer in the simplest form.)

Ans: (a) _____ (1)

(b) _____ (2)

37. A grocer packed 252 kg of rice into bags of 5-kg and 2-kg. He has an equal number of 5-kg bags and 2-kg bags of rice. How many bags of rice does he have in all?

Ans: _____ (3)

6
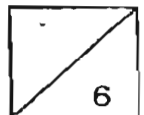
38. The graph below shows the electricity consumption of the Chan family for 5 months.
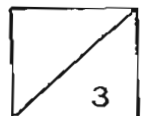
(a) In which month was the electricity consumption $\frac{2}{3}$ that of March?

(b) The electricity consumed is charged at the rate of 20 cents per kWh. How much did the Chan family pay for electricity from January to May?

Ans: (a) _____ (1)

(b) _____ (2)

3

39. (a) In the space below, draw a parallelogram ABCD in which AB = 8 cm, BC = 5 cm and $\angle$ ABC = 120°. (2)

(b) Measure and write down the size of $\angle$ DAB.

Ans: (b) _____ (1)

40. Mavis and Janice have some beads each. If Mavis gives 30 beads to Janice, she will have 4 times as many beads as Janice. If she gives 150 beads to Janice, she will have $1\frac{1}{2}$ times as many beads as Janice.
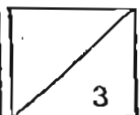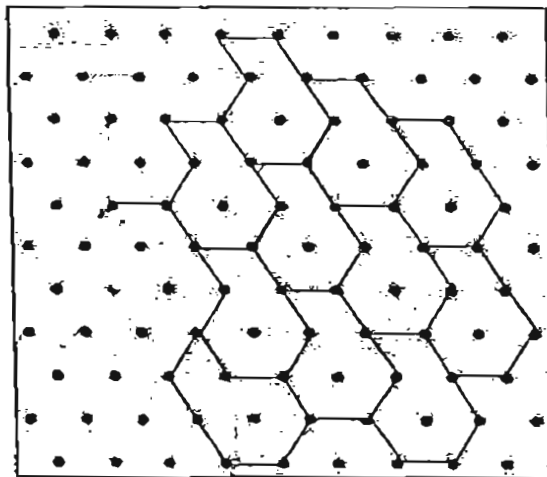
Find the number of beads Mavis has.

Ans: _____ (3)

6
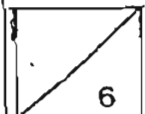
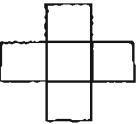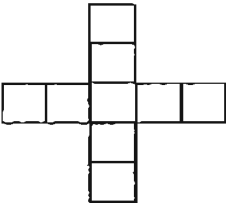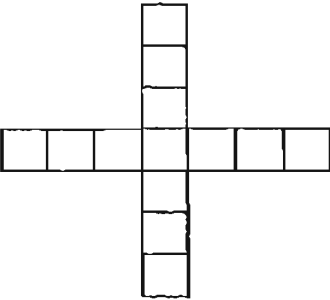41 (a) Complete the following to form a symmetric figure about the line AB.   (1)

41 (b) i) Shade the unit shape that does not fit into the tessellation below.(1)

ii) Draw 2 more unit shapes to extend the tessellation in the grid provided.(1)

3

42. The shapes in the table are made up of 1-cm squares.
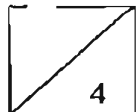Study the pattern carefully and answer the questions that follow.

	Shape 1	Shape 2	Shape 3
Area (cm^2)	5	9	13
Perimeter (cm)	12	20	28

a) What is the perimeter of Shape 15?

b) What is the area of the shape when its perimeter is 172 cm?
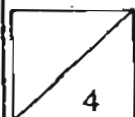
Ans: (a) _____ (2)

(b) _____ (2)

4

43. Alan and Bryan had $480. Alan gave $\frac{2}{5}$ of his money to Bryan. In return,

Bryan gave $\frac{3}{7}$ of his total amount to Alan. They then had the same amount

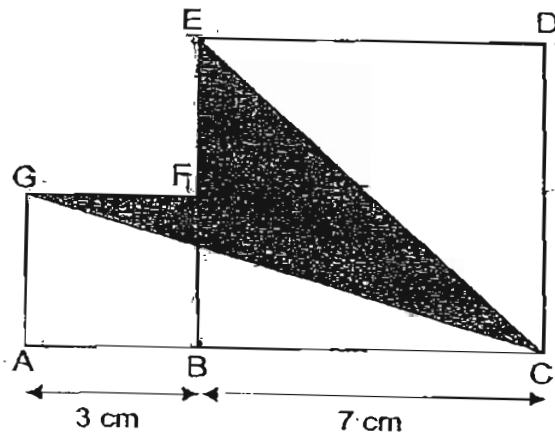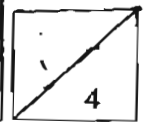of money. How much money did Alan have at first?

Ans: _____ (4)

4

44. The figure is made up of a 3-cm square and a 7-cm square.
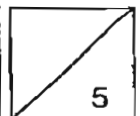Find the shaded area of the figure.

3 cm   7 cm

Ans: _____ (4)

4

45. When Mrs Lee was 40 years old, her son was twice her daughter's age. Mrs Lee will be twice her son's age when her daughter is 28 years old. How old will Mrs Lee be when her daughter is 20 years old?
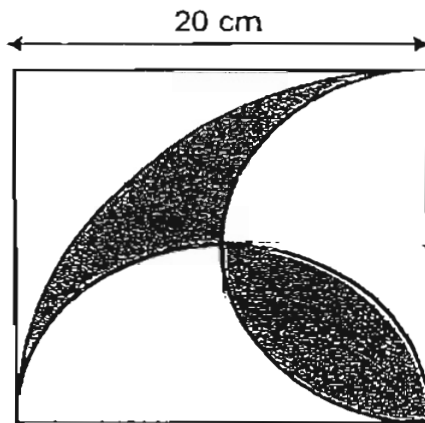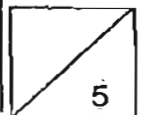
Ans: _____(5)

5

46. The figure shows a square of side 20 cm enclosing a quarter circle and two semicircles. Find the total shaded area of the figure. (Take $\pi = 3.14$)
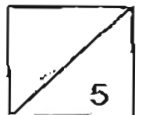

20 cm

Ans: _____(5)

5

47. At 7 a.m., Car A left Town X for Town Y while Car B left Town Y for Town X. At 3 p.m., the two cars passed each other. 5 hours later, Car A reached Town Y but Car B was still 150 km away from Town X. Find the distance between Town X and Town Y.
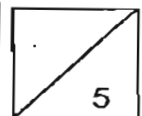
Ans: _____ (5)

5

48. At an exhibition, the number of male visitors was 500 more than the number of female visitors on the first day. On the second day, the number of male visitors decreased by 10% but the number of female visitors increased by 15%. Given that there were 1680 visitors on the second day, how many female visitors were there on the second day?

Ans: _____ (5)

END OF PAPER

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

16. 870499

17. 20.076

18. $\dfrac{4}{9}$

19. 600m

20. 1kg 700g

21. 52

22. 30

23. 130km/hr

24. D

25. 5 : 2

26. 0.025

27. $4

28. 20cm³

29. 15cm

30. $18

31. $200

32. 55°

33. 24

34. 280

35. 20

36a. (8k + 3) years old

36b. 12 : 13

37. 72 bags

38a. April

38b. $400

40. 510 beads
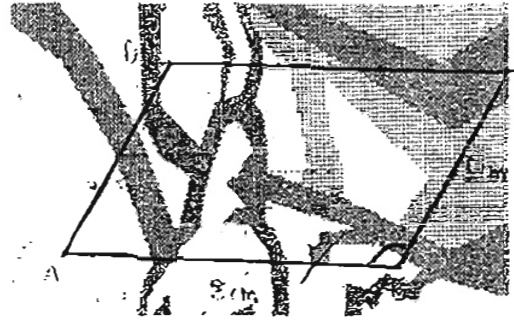
42a. 124cm
42b. 18.5cm²
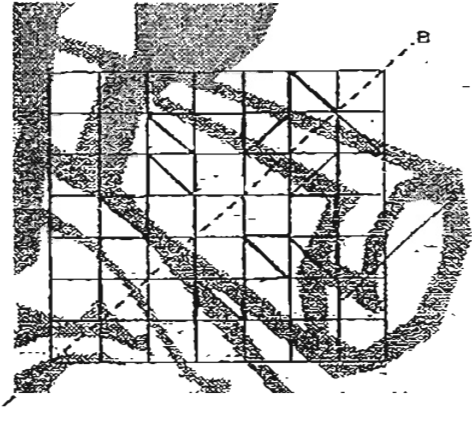
44. 18.5cm²
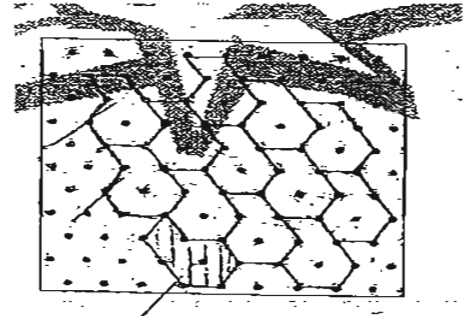
46. 114cm²

48. 690 female visitors

39a.

39b. 60°

41a.

41b.

43. $100

45. 56 years old

47. 400km