Name : _____ (  ) Index Number [ ][ ][ ][ ][ ] — [ ]

Class : Primary 6 (Y) C / G / SE / P

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**SINGAPORE CHINESE GIRLS' SCHOOL (PRIMARY)**

**PRELIMINARY EXAMINATION 2008**

**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**

**Booklet A (20 marks)**

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?

   1 090 901 = 1 000 000 + ☐ + 1

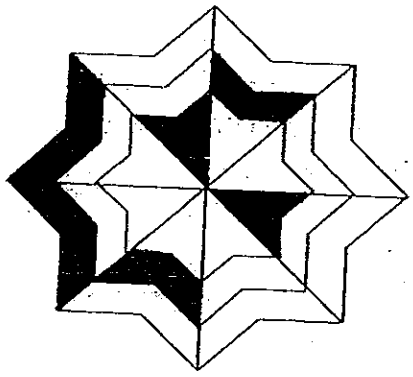
   (1) 909
   (2) 9 090
   (3) 90 900
   (4) 1 090 900

2. 2 ones, 2 tenths and 2 thousandths is the same as _____.

   (1) 2.004
   (2) 2.022
   (3) 2.202
   (4) 2.222

3. What fraction of the figure is shaded?

   (1) $\frac{2}{3}$
   (2) $\frac{1}{4}$
   (3) $\frac{3}{4}$
   (4) $\frac{1}{8}$





17

4. $0.05 + \frac{3}{4} + 1 =$ _____

(1) 0.8
(2) 1.125
(3) 1.8
(4) 2.25

5. Train A is travelling from Town X to Town Y which is 45 km away. At what speed must Train A travel at to reach Town Y in 30 min?

(1) 15 km/h
(2) 22.5 km/h
(3) 90 km/h
(4) 135 km/h

6. Express $\frac{7}{25}$ as a percentage.

(1) 7%
(2) 28%
(3) 35%
(4) 49%

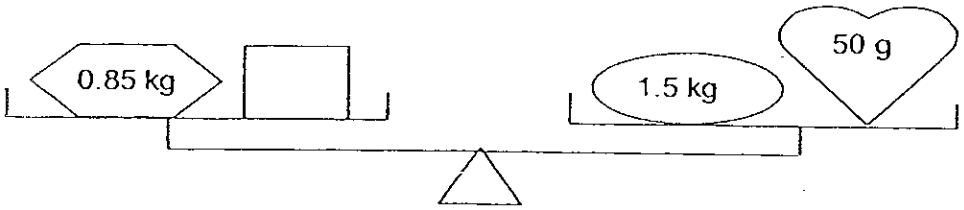
7. Ali exchanges 16 coins for a $5 note. He has only 2 types of coins. 10 of the coins are of the same value. What are the values of each type of coins?

(1) 10¢ and 20¢
(2) 10¢ and 50¢
(3) 20¢ and 50¢
(4) 50¢ and $1



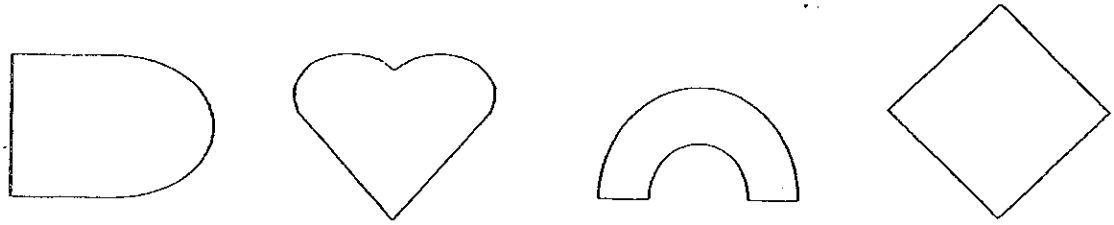
175

8. What is the mass of ☐ ?




(1) 0.65 kg
(2) 0.7 kg
(3) 1.15 kg
(4) 50.65 kg

9. Which of the following can be tessellated?



A B C D

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

10. A square has a perimeter of $36x$ cm. What is the length of each of side?

(1) $4x$ cm
(2) $6x$ cm
(3) $9x$ cm
(4) $18x$ cm



176

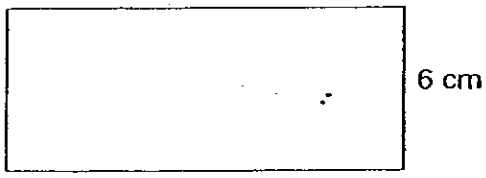
11. If 3 m of ribbon cost \$9, how much does 5.25 m of ribbon cost?

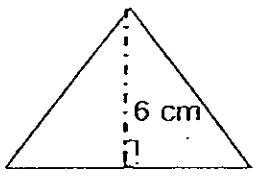
(1) \$15.75
(2) \$16.5
(3) \$45
(4) \$47.25

12. After cutting 5 m from Rope A and 2 m from Rope B, the length of Rope A is $\frac{1}{2}$ as long as Rope B. If the two ropes were of the same length at first, find the original length of each rope.

(1) 5 m
(2) 6 m
(3) 8 m
(4) 10 m

13. If the area of the triangle is 50% that of the area of the rectangle, what is the length of the rectangle?

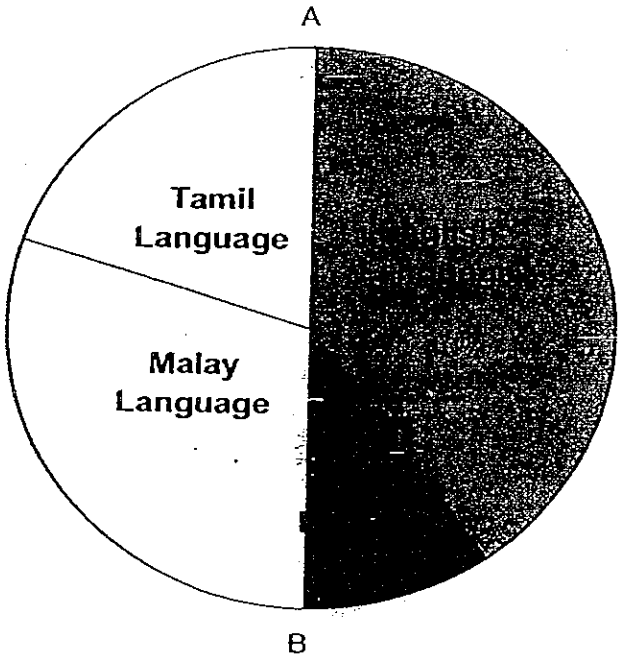



12 cm

(1) 12 cm
(2) 36 cm
(3) 60 cm
(4) 72 cm

14. The pie chart shows the types of books available in a library. AB is a straight line. The ratio of Tamil Language storybooks to Malay Language story books is 2 : 3. If there are 500 Chinese Language and English Language story books, how many Malay storybooks are there in the library?

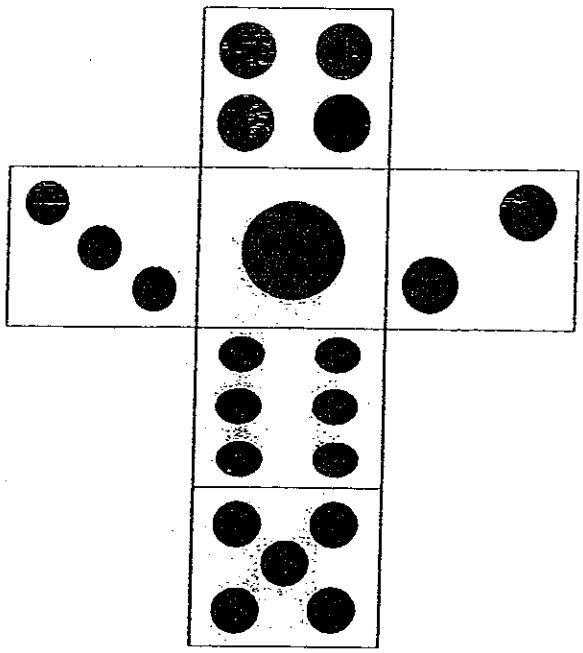


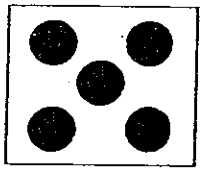

(1) 200
(2) 300
(3) 500
(4) 1000

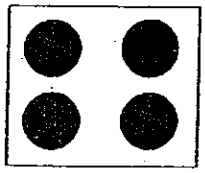


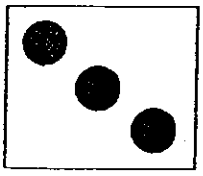
178

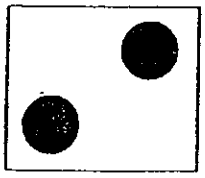
15. The figure shows the net of a dice.

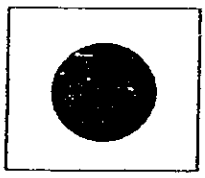


The dice is placed on the table with  facing the bottom. Which face is facing upwards?

(1) 

(2) 

(3) 

(4) 

**Booklet B (80 marks)**

Do not write in this column

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. Fill in the boxes with the correct operation symbol "-", "x".

( 0.02 [ + ] 0.08 ) [ ] 80 [ ] 80 [ ÷ ] 10 = 0

17. Arrange the following decimals in ascending order.

1.01, 1.1, 1.001, 0.101

Ans: _____

18. 9 pizzas are shared equally among some girls. How many girls are there if each girl gets $\frac{3}{4}$ of the pizza ?

Ans: _____ girls

3



180

Do not write in this column

19. Jillian is 8 years 5 months old. Her brother is $2\frac{3}{4}$ years older than her.

How old is her brother?

Ans: _____ years _____ months

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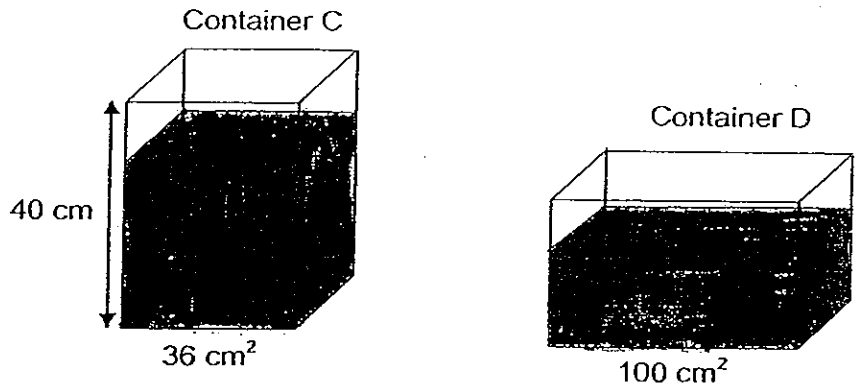
20. An equal amount of water is poured into two containers C and D. If Container C is $\frac{3}{4}$ filled with water, what is the height of the water level in Container D ?




Ans: _____ cm

2



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21. Team SCGS has 4 girls who run a total of 240 rounds. If 3 girls run an average of 56 rounds, how many rounds must the 4th girl run for the team ?

Do not write in this column

Ans: _____ rounds

22. Meifeng completed her work at 1.05pm. She took 2 h 24 min to complete her work. What time did Meifeng start her work?

Ans: _____

2



182

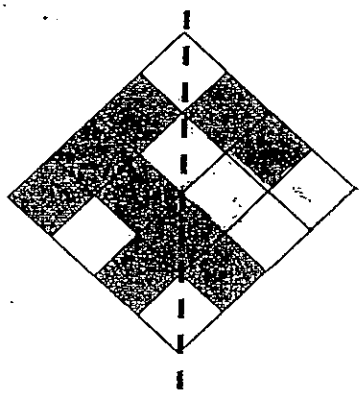
18

23. A 200 m long MRT train took 20 min to pass through a tunnel completely. If the MRT train travelled at an average speed of 120 m/min, find the length of the tunnel.

Do not write in this column

Ans: _____ m

24. Shade 2 squares to make the figure below symmetrical.



25. Mary had 300 cards. She gave 120 cards to Su-ann and sold 60% of the remainder. How many cards did Mary sell ?

Ans: _____ cards

3



183

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.

Do not write in this column

26. The total cost of 5 blouses and 2 skirts is $181. A blouse costs $25 more than a skirt. What is the total cost of a blouse and a skirt ?

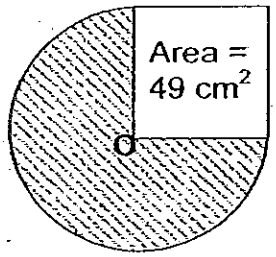
Ans: $_____

27. The ratio of the number of cookies Alice has to the number that Fiona has is 3 : 8. After Fiona has given 12 cookies away, she still has 18 cookies more than Alice. How many cookies does Alice have ?

Ans: _____ cookies

28. The figure below is not drawn to scale. O is the centre of the circle. If the area of the square shown is 49 $cm^2$, find the area of the shaded part ?

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




Ans: _____ $cm^2$

6

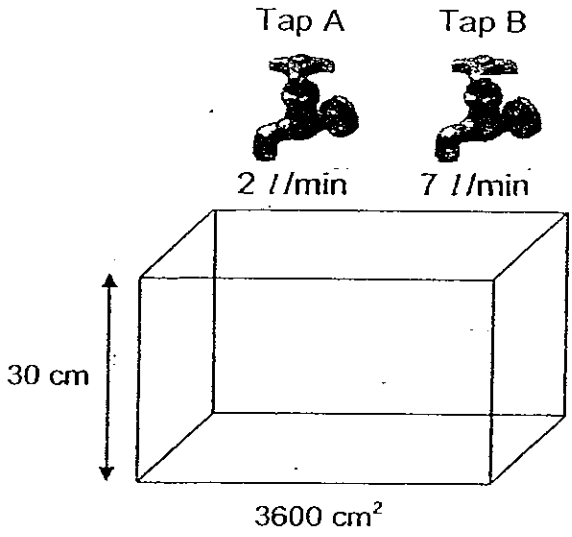


184

18

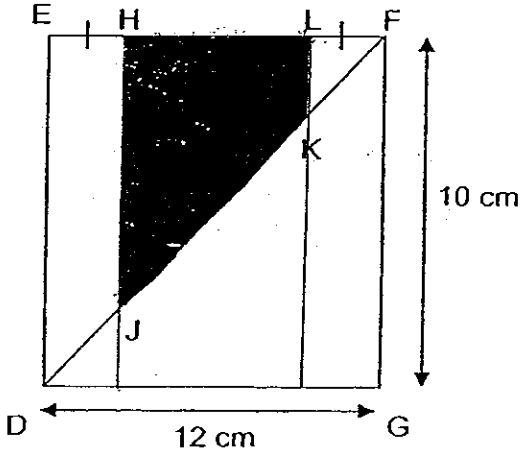
29 Water is flowing from Tap A and Tap B at a rate of 2 *l*/min and 7 *l*/min respectively. Both Tap A and Tap B are turned on at the same time. How long does it take for both taps to fill up the entire tank ?
( 1 *l* = 1000cm$^3$)

Do not write in this column




Ans: _____ min

30. In the figure, DEFG is a rectangle. If the total length of EH and LF is equal to the length of HL, find the shaded area of the figure below?




Ans: _____ cm$^2$

4

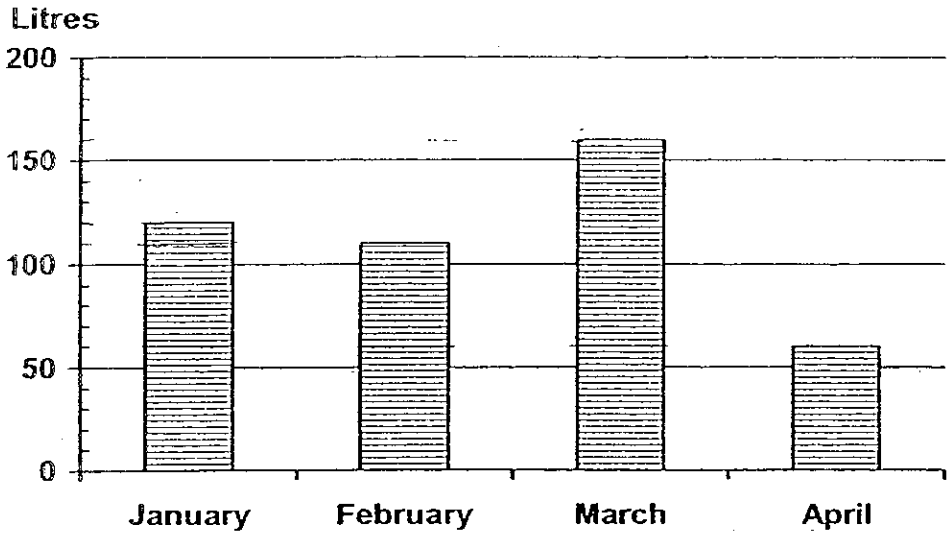
4



185

31. The graph below shows the amount of water Doreen used in 4 months.

Do not write in this column




| Cost of water usage | |
|---|---|
| **Litres** | **Amount** |
| First 50 litres | $10 |
| Subsequent 5 litres | $3 |

How much did Doreen pay for water usage in March ?

Ans: $_____

2

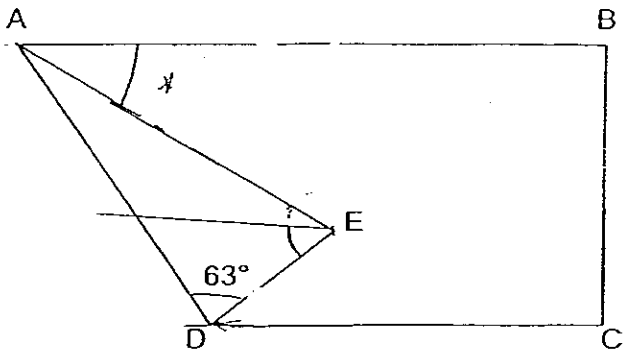


186

18

32. In the figure below, a rectangular piece of paper is folded at one of its corners E as shown. Find $\angle x$.

Do not write in this column




Ans: $\angle x$ = _____°

33. At 10 00, a car left Town A for Town B travelling at a speed of 80 km/h. At the same time, another car left Town B for Town A at a speed of 100 km/h. The distance between the 2 towns was 540 km. At what time did the cars pass each other ? (Express the time using the 24-hour clock)

Ans: _____

4



187

34. 10% of the balloons are red. The number of red balloons is $\frac{1}{5}$ the number of blue balloons. The remaining of the balloons are green. If there are 80 green balloons, how many balloons are there altogether ?

Do not write in this column

Ans: _____ balloons

35. Study the diagram below carefully.

How many points are needed to divide a line into 25 equal parts ?

Figure 1

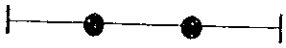


Figure 2

Figure 3

| No. of points | 1 | 2 | 3 |
|---|---|---|---|
| No. of equal parts | 2 | 3 | 4 |

Ans: _____ points

4



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Name : _____ (  ) Index Number [ ][ ][ ][ ][ ] – [ ]

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

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**SINGAPORE CHINESE GIRLS' SCHOOL (PRIMARY)**

**PRELIMINARY EXAMINATION 2008**

**MATHEMATICS**

**BOOKLET B**

**33 Questions**

**80 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**

189

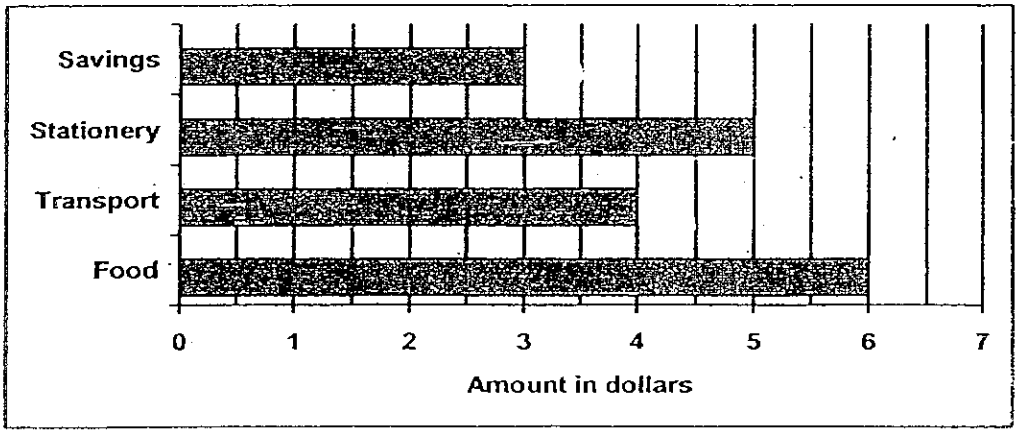
Name : _____ ( ) Date : _____

Class : Primary 6 (SY) / C / G / SE / P Duration : 2 h 15 min

Do not write in this column

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.

36. The graph below shows how John spent his pocket money for **five** days. Study it carefully and answer the questions.




(a) What is the John's daily expenditure?

(b) What percentage of the total sum does he spend on food?

Ans: (a) _____ (1)

(b) _____ (2)

3



190

37. Rachel is $x$ years old now. Her mother is 36 years older than Rachel. Her father's age is the sum of Rachel's age and her mother's age. How old is Rachel's father?

Ans:_____(3)

38. Mother bought a total of 12 books and files for \$93. She bought 2 more books than files. A book costs \$3 more than a file. How much ~~more~~ did she pay for the files?

Ans:_____(3)

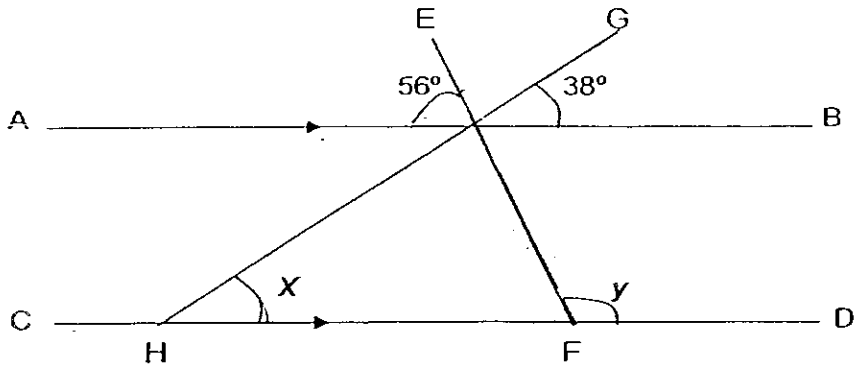
6



191

39. In the figure, AB // CD. EF and GH are straight lines.
Find the values of $\angle x$ and $\angle y$.

Do not write in this column




Ans: $\angle x$_____(2)

$\angle y$_____(1)

3



192

40. The number of girls who registered for art class was 20% of the number of boys. On the actual day, 3 more girls and 3 more boys turned up for the class. As a result, there were $\frac{1}{3}$ as many girls as boys at the art class.

What was the total number of children who came to art class?

Do not write in this column

Ans: _____

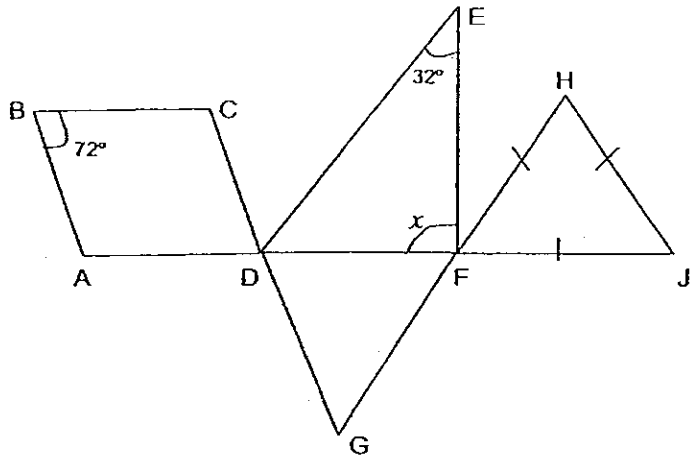
3



193

41. In the figure (not drawn to scale), ABCD is a rhombus, FHJ is an equilateral triangle and EFGD is a trapezium with ED parallel to FG. ~~ABFH~~; ~~JFG~~ and ~~CBG~~ are straight lines. Find $\angle x$.

ADFJ, HFG CDG




Ans: _____ (3)

Do not write in this column

3



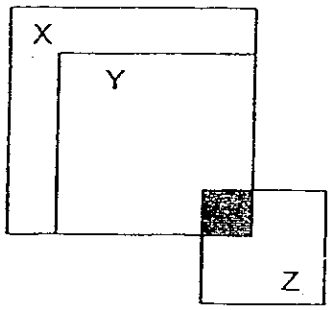
194

42. In the diagram below, 75% of square Z is not shaded. The ratio of the area of square X to the area of square Y is 9:4. The ratio of the area of square Y to the area of square Z is 4:1.

(a) What is the ratio of square X to the area of square Z?

(b) Find the ratio of the unshaded area of square Y to the unshaded area of square Z.

Do not write in this column




Ans: (a)_____ (2)

(b) _____ (2)

4



195

43. There were 9 chairs in each row. 8 rows of chairs were rearranged, equally spaced, to form the perimeter of a square. There were same numbers of chairs on each side of the square. How many chairs were there on each side of the square?

Do not write In this column

Ans: _____(4)

4



196

18

44. Andrew left Town X for Town Y which was 500 km apart. He travelled at an average speed of 90 km/h for $\frac{3}{5}$ of the journey. He then increased his speed by 30 km/h for the rest of the journey and reached Town Y at 2 pm. Richard also left Town X for Town Y at the same time as Andrew and he drove at an average speed of 100 km/h for the whole journey.

Do not write in this column

a) What time did Andrew leave Town X?

b) How far apart were they at 1pm?

Ans: (a)_____(2)

(b)_____(2)

4



197

45. Nelly has 1000 beads. She puts them in a box with 40 holes. She puts 1 bead in the first hole, 2 beads in the second hole, 3 beads in the third hole and so on until all the 40 holes are filled with beads. How many beads are left when she has filled all the holes?

Do not write in this column

Ans: _____ (5)

5



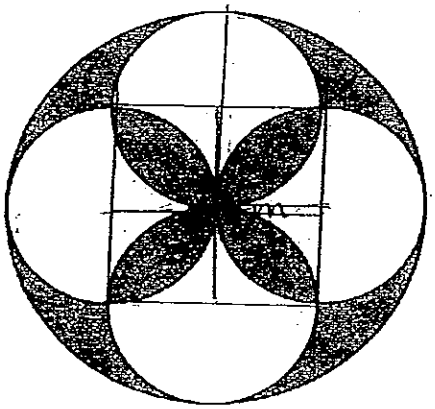
198

18

46. The figure is formed by 4 small identical circles in a big circle. The big circle has a diameter of 28 cm.

(a) Find the area of the unshaded part.

(b) Find the perimeter of the unshaded part marked X. (Take $\pi = \frac{22}{7}$)




Do not write in this column

Ans: (a)_____(2)

(b)_____(3)

5



199

47. Mary had some \$5 and \$10 notes in her wallet. There was a total of 60 pieces of notes at first. She used half of the number of \$5 notes and received another twelve \$10 notes from her mother. After that, the number of \$10 notes she had was $\frac{2}{3}$ of the remaining number of \$5 notes she had left. How much money did she have at first?

Do not write in this column

Ans: _____(5)

5



200

18

48. At a farm, 40% of the animals are cows, 90% of the remainder are sheep and the rest are ducks. There are 56 more sheep than cows. After some cows died, 20% of the remaining animals at the farm are cows. How many cows are there left at the farm?

Do not write in this column

Ans: _____

5

END OF PAPER



201

# ANSWER SHEET

EXAM PAPER 2008

SCHOOL : SCGS PRIMARY SCHOOL
SUBJECT : PRIMARY 6 MATHEMATICS

TERM : SA 1

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

16)x,- 17)0.101,1.001,1.01,1.1 18)12 girls

19)11 years 2 months 20)10.8cm 21)72 rounds 22)10.41am

23)2200 24) 25)108 cards 26)$41

27)18 cookies 28)115.5 29)12 min 30)30cm$^2$

31)$76 32)36° 33)1300 34)200 balloons

35)24 points 36)a)five--$5+$4+$6=$15
daily--$15÷5=$3
b)6 x100%=33$_{1/3}$%

37)(2x +36)yrs old.

38)12u→$93-($3x7)=$72
1u→$6
5u→$30

39)∠a→180° -56° -38° =86°
∠b→180° -86° -56° =38°
∠x=38°
∠y→180° -56° =124°

40)
b 

g 

1u→1u+3
2u→2(1u+3)

2u→4□
Total→3x8=24

41)∠x→180° -32° -60° =88°

42)a)x : y : z
9 : 4
4 : 1
9 : 4 : 1

b)75%--- ¾ of Z is unshaded
Z shd→ ¼
Unshd of Y : unshaded of z
16-1 : 4 - ¼ x4
15 : 4-1
15 : 3
5 : 1



204

43)Total number of chars→8x9=72

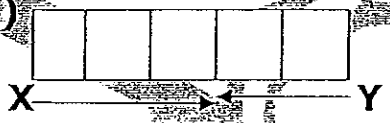
Number of chairs left after taking away 4 corners→72-4=68

Number of chairs in each row without the 4 corners→68÷4=17

Number of chairs in each side of the square→17+2=19

Ans:19

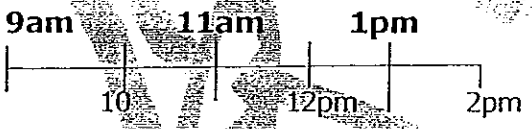
44)




a—300km a-200km

s—90km/hs—120km/h

a)time→500÷100=5h




b)distance travelled by Andrew after 4 hrs—4x100=400km

$\frac{2}{3}$ x120=80km

Apart—400-(300+8)=20km

Ans:a)9am

b)20km

45)41x20=820

Left—1000- 820=180



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46)a)area of big circle→$\frac{22}{7}$ x14x14=616cm$^2$

area of 4 small semicircles→($\frac{22}{7}$ x7x7)x2= 382cm$^2$

area of 1 small sq→7x7=49cm$^2$

1 small quadrant→ ¼ x$\frac{22}{7}$ x7x7=38.5cm$^2$

1 small pt→49-38.5=10.5cm$^2$

8 small pts→84cm$^2$

Unshd pts→84+308=392cm$^2$

b)circumference of big circle→$\frac{22}{7}$ x28=22x4=88

Circumference of small circle→$\frac{22}{7}$ x14=44

Perimeter of X→( ¼ x88)+( ½ x44)=22+22=44cm

47)8u→60+12=72

1u→9 notes

($5)6u→54

2u→18

$10→18-12=6

Amt →54x$5+6x$10

=$270+$60=$330

48)<u>At the farm</u>

Cow→40%

Sheep→$\frac{90}{100}$ x 60%→=54%

Diff→54%-40%=14%

14%-->56 sheeps

1%→56÷14=4

Total animals→4x100

Total sheep and ducks→$\frac{60}{100}$ x400=240

After some cows died,80%are sheep and ducks

80%-->240

10%-->240÷8=30

Number of cows left→20%

20%-->30x2=60



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END