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SA2

**PRELIMINARY EXAMINATION 2004
MATHEMATICS**

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A	/25
B	/20
C1	/15
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BOOKLET A

INSTRUCTIONS TO CANDIDATES

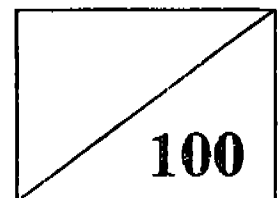
Do not open the booklet until you are told to do so. Follow all instructions carefully.
Answer all questions.

NAME

CLASS **PRIMARY 6**

DATE **14th September 2004**

DURATION **2 HOURS 15 MINUTES**



Section A (25 marks)

Questions 1 to 5 carry 1 mark each. Questions 6 to 15 carry 2 marks each. For each question, 4 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.

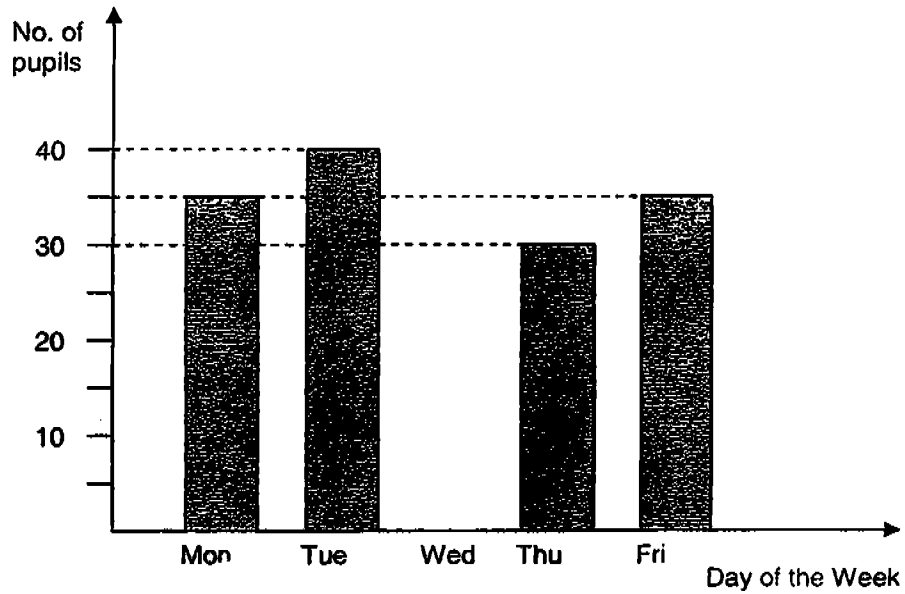
1. Find the product of 371 and 15.
 - (1) 356
 - (2) 386
 - (3) 1855
 - (4) 5565

2. What is the value of $(24 \times 5) + (78 \div 3)$?
 - (1) 55
 - (2) 66
 - (3) 146
 - (4) 664

3. How many litres of water are there in 6010 cm^3 of water?
 - (1) 6 l
 - (2) 6.01 l
 - (3) 60.1 l
 - (4) 61 l

4. A rope of $\frac{8}{9}$ m long is cut into 6 equal pieces. What is the length of 1 piece of rope in metres? (Give your answer correct to 2 decimal places.)
 - (1) 0.14 m
 - (2) 0.15 m
 - (3) 1.48 m
 - (4) 1.50 m

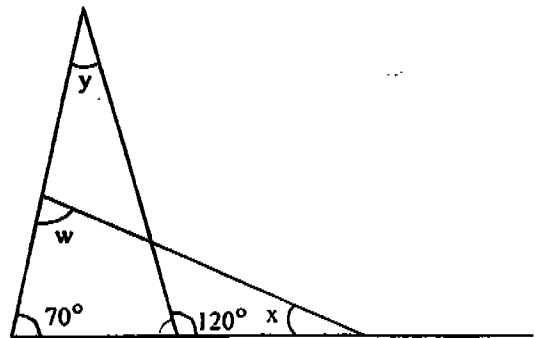
5. The graph below shows the number of pupils who attended the June supplementary classes for 4 days. There was no lesson on Wednesday as it was a public holiday.



What was the average attendance for the 4 days?

- (1) 28
 - (2) 29
 - (3) 34
 - (4) 35
6. The figure below is not drawn to scale. Find the sum of $\angle w$, $\angle x$ and $\angle y$.

- (1) 120°
- (2) 160°
- (3) 190°
- (4) 360°



7. Find the value of $8 \div 8 \div 8 \div 8 =$

(1) $\frac{1}{88}$

(2) $\frac{1}{64}$

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

(4) 1

8. Rosietta bought 3 story books at \$1.40 each and 2 magazines at \$6.40. How much did she pay altogether?

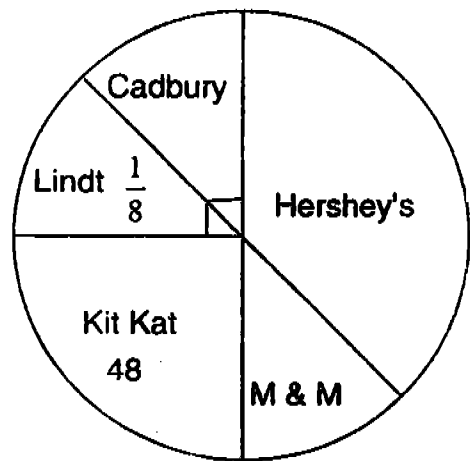
(1) \$7.80

(2) \$9.20

(3) \$10.60

(4) \$17.00

9. A group of pupils was asked to choose a brand of chocolate that they liked best. The pie chart below shows a breakdown of their choice brand of chocolate.



The number of pupils who chose Cadbury was equal to the number who chose M & M. How many people chose Hershey's?

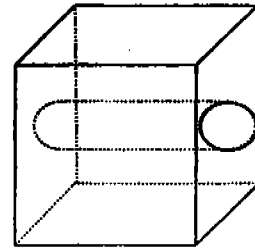
(1) 48

(2) 60

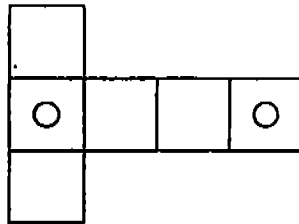
(3) 72

(4) 84

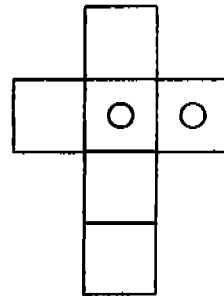
10. The figure shows a cube with a hole drilled through it.
Which of the nets below is a net of this cube?



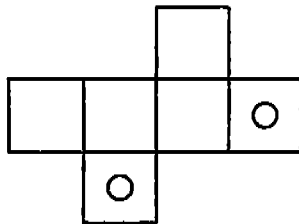
(1)



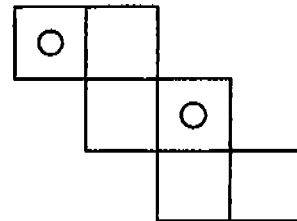
(2)



(3)



(4)



11. 3kg of rice cost \$4.70. How much will 45kg of rice cost?

- (1) \$14.10
- (2) \$45.00
- (3) \$70.50 ✓
- (4) \$211.50

12. Mrs Chew made some pineapple tarts to sell at a fair. She sold 60% of the tarts on Saturday and $\frac{5}{8}$ of the remainder on Sunday. What percentage of the tarts did she sell?
- (1) $52\frac{1}{2}\%$
 (2) 75 %
 (3) 85 %
 (4) $97\frac{1}{2}\%$
13. If 40% of $W = 50\%$ of Y
 What percentage of Y is W ?
- (1) 75 %
 (2) 80 %
 (3) 90 %
 (4) 125 %
14. Tessa, Sharifah and Ke Xin shared \$36p in the ratio of 7 : 2 : 3
 How much more money did Tessa and Sharifah have than Ke Xin?
- (1) \$12p
 (2) \$15p
 (3) \$18p
 (4) \$21p
15. A cyclist cycles at a speed of d m/min for 30 minutes. If he doubles his speed to cover the next $60d$ metres, what is his average speed for the whole journey?
- (1) $\frac{3d}{2}$ m/min
 (2) $2d$ m/min
 (3) $3d$ m/min
 (4) $90d$ m/min

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**PRELIMINARY EXAMINATION 2004
MATHEMATICS**

BOOKLET B

INSTRUCTIONS TO CANDIDATES

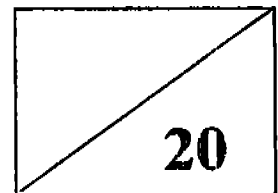
Do not open the booklet until you are told to do so. Follow all instructions carefully.
Answer all questions.

NAME

CLASS **PRIMARY 6** ()

DATE 14th September 2004

DURATION **2 HOURS 15 MINUTES**



SECTION B

Questions 16 to 35 carry 1 mark each. Write your answers in the spaces provided. Give your answers in the units stated.

16. Write eight million, two thousand and ninety-one in numerals.

Answer: _____

17. Subtract $1\frac{3}{4}$ from $3\frac{7}{10}$. Express your answer in decimal.

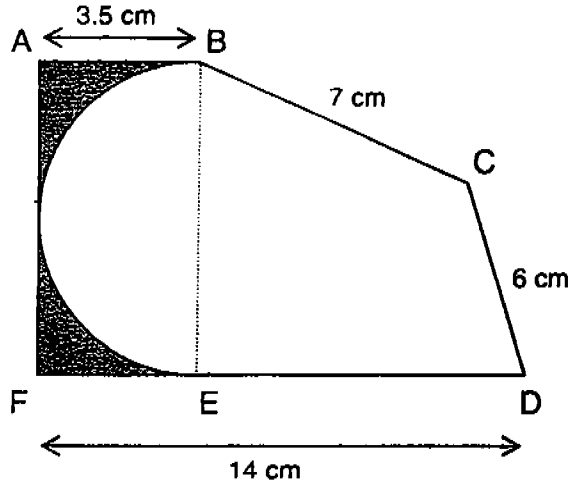
Answer: _____

18. Given that, $36 \times 25 = 900$

then $40 \times 25 = 900 + (\square) \times 5 \times 5$. What is the missing number in the box?

Answer: _____

19. The figure is not drawn to scale. BE is the diameter of a circle. Find the perimeter of the unshaded part of the figure. (use $\pi = \frac{22}{7}$)

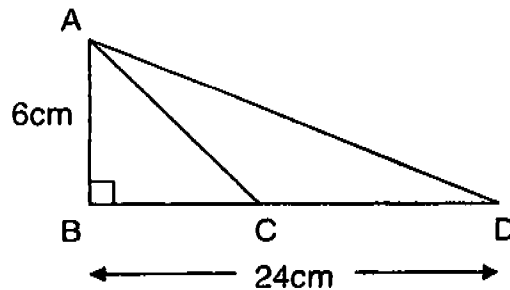


Answer: _____ cm

20. How many 2-cm cubes can be placed in a rectangular container of dimension 10cm by 7cm by 15cm?

Answer: _____

21. The figure below is not drawn to scale. What is the area of triangle ACD, if triangle ABC is a right-angled isosceles triangle and $BD = 24\text{cm}$?

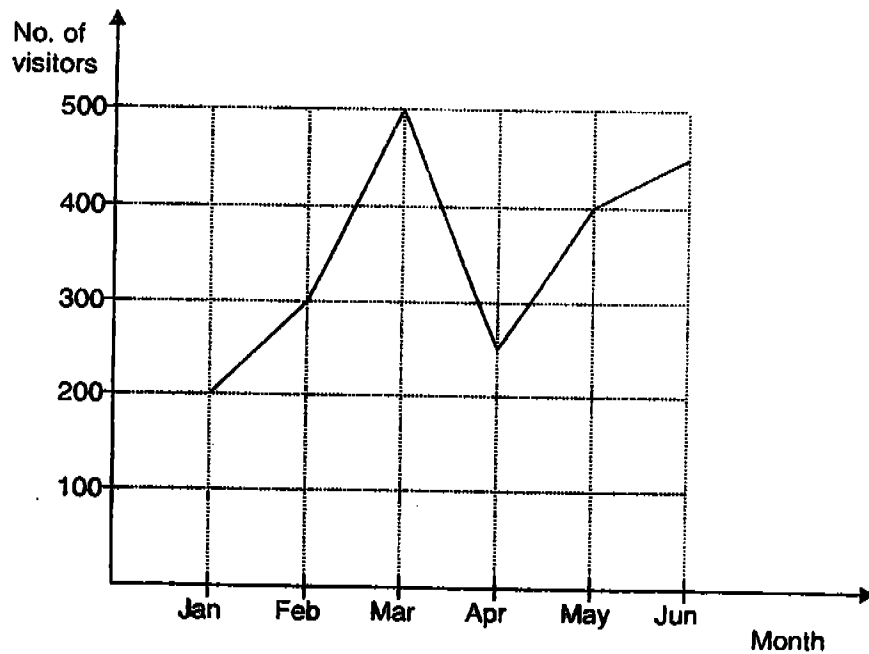


Answer: _____ cm^2

22. A container with a capacity of 1.05ℓ is filled to the brim with water. When two metal cubes of 3-cm are placed into the container, some water flows out. How much water is left in the container? (Give your answer in ℓ .)

Answer: _____ ℓ

23. The graph below shows the number of visitors who visited the Butterfly Park during the first six months of the year 2003.



Using the graph above, find the percentage increase in the number of visitors in May compared to April.

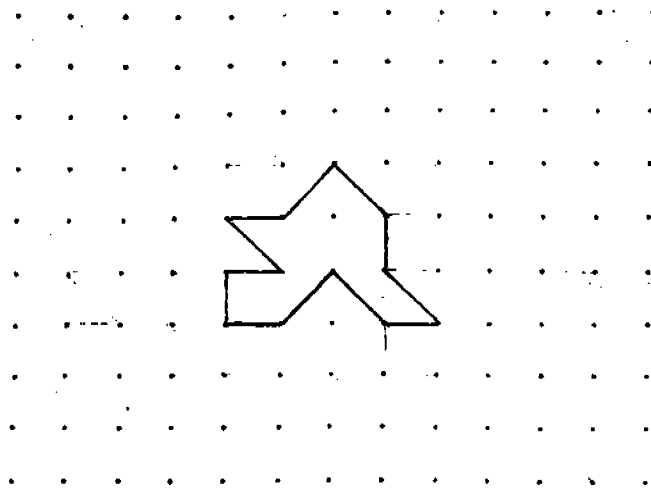
Answer: _____ %

24. How many curved faces does the cylindrical solid have?



Answer: _____

25. Draw 6 more basic units to add on to the tessellation.



26. Mr. Lim travelled from Serangoon to Batu Pahat via Tuas.

He took $\frac{3}{4}$ h to travel from Serangoon to Tuas and another $1\frac{1}{4}$ h to travel from Tuas to Batu Pahat. Find the average speed of his whole journey.



Answer: _____ km/h

27. Jack earned \$3060 in April which included overtime pay of \$15 per additional hour that he worked. If he had worked 12 hours overtime, what was his basic salary?

Answer: \$ _____

28. A sum of money was shared among Liza, SuMei and Jeranti in the ratio of 3 : 5 : 8. Express Jeranti's share as a fraction of SuMei's share.

Answer: _____

29. Mrs. Cheo uses 30 eggs to make 4 cakes. How many eggs does she need to make 12 cakes?

Answer: _____

30. A company conducted a poll among its employees. 240 employees supported an idea while 180 opposed it. How many percent more employees supported the idea than opposed it?

Answer: _____ %

31. Simplify $2p - 10 + 4 + (5p \times 2)$.

Answer: _____

32. Meili bought 6 pencils at the cost of $15q$ cents each. How much change would she receive if she paid the cashier \$100? (Give your answer in terms of q .)

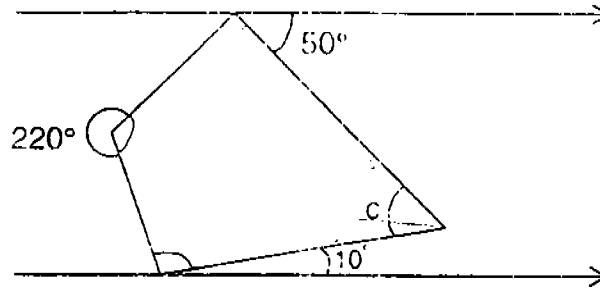
Answer: \$ _____

33. How many numbers greater than 6000 can you form from the following digits? (Each digit can only be used once in each number.)

0	3	6	9
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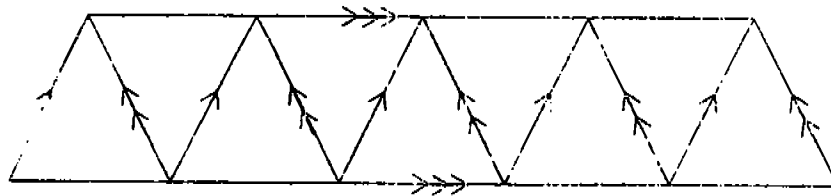
Answer: _____

34. Find the value of $\angle c$ in the figure below.



Answer: _____

35. How many parallelograms of any size can you see in the figure?



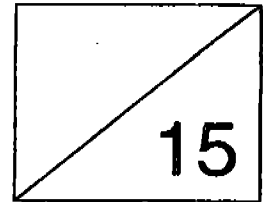
Answer: _____

END OF SECTION B

SECTION C1

NAME: _____ ()

CLASS: Primary 6 _____

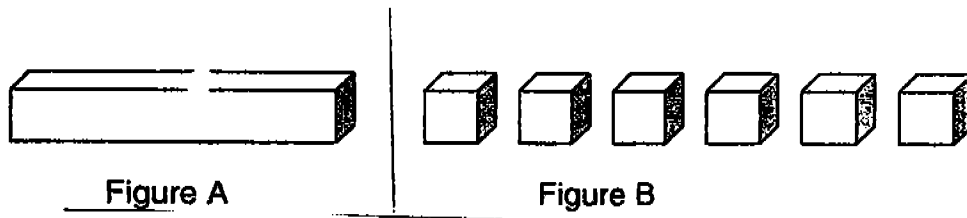


For questions 36 to 50 show your working clearly in the space below each question and write your answers in the space provided. The number of marks allocated is shown in brackets [] at the end of each question or part-question.

36. Mrs Chew was thrice as old as her daughter 4 years ago. At present, their total age is 48 years. How old is Mrs Chew now?

Answer: _____ [2m]

37. A cuboid, 1cm by 1cm by 6cm as shown in Figure A is sliced into 6 equal pieces of cubes as shown in Figure B. Find the difference in the total surface area of the 6 cubes and the cuboid.



Answer: _____ [2m]

38. Construct a rhombus ABCD, where $AB = 6\text{cm}$ and $\angle DAB = 40^\circ$ [2m]

39. An empty rectangular tank has a base area of 2000cm^2 . A stone of volume 3000cm^3 is placed in the tank. The tank is then filled with water flowing from a tap at a rate of $11\frac{1}{2}$ ℓ/min . How long will it take to fill the tank up to the height of 36cm ? (1 litre = 1000cm^3)

Answer: _____ [3m]

40. The cost of a pencil and three notebooks is \$3.30. The cost of three pencils and a notebook is \$1.90. Find the cost of a pencil.

Answer: _____ [3m]

41. Find the value of $2 + 4 + 6 + 8 + \dots + 76 + 78 + 80$.

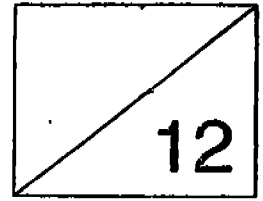
Answer: _____ [3m]

END OF SECTION C1

SECTION C2

NAME: _____ ()

CLASS: Primary 6 _____



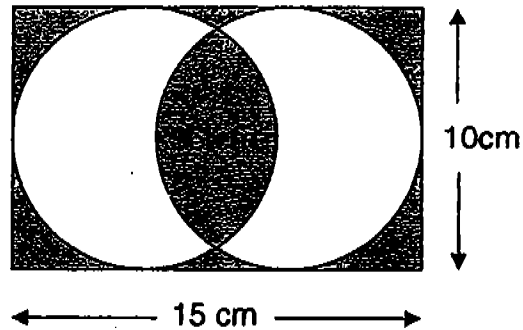
42. Mr Ma received a sum of money. He kept 25% of it and gave $\frac{5}{9}$ of the remainder to Mrs Ma. The rest of the money was divided equally among his 4 children.

- (a) What fraction of the money did each child get?
(b) If each child received \$250, how much was the sum of money that Mr Ma received?

Answer: (a) _____ [3m]

(b) _____ [1m]

43. The figure below consists of 2 overlapping circles and a rectangle. Area of the overlapping portion is 36 cm^2 . Find the total area of the shaded parts in the figure. (Take $\pi = 3.14$)



Answer: _____ [4m]

44. In a game of darts, a player can obtain a whole-number score of not more than 10. Samad played 4 games and obtained scores of 5, 6, 6 and 8. He played 2 more games and his average score became 7.5. Then he played 4 more games and his average score became 8.2. Find Samad's score in each of the last 4 games, given that he scored a total of four 10s in the ten games.

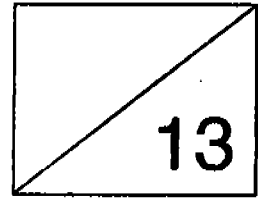
Answer: _____ [4m]

END OF SECTION C2

SECTION C3

NAME: _____ ()

CLASS: Primary 6 _____



45. A dress cost \$120. A blouse cost 25% cheaper. A clothing merchant paid \$2160 for some dresses and blouses. If 60% of the amount paid by the merchant was for dresses, how many blouses did he buy?

Answer: _____ [4m]

46. This is a number pattern with cubic numbers.

(a) Look at the first few patterns and complete the blanks in Patterns 4 and 5. [2m]

Pattern No.	Series
1	$1 \times 1 \times 1 = 1 = 1^2$ <hr style="border-top: 1px dashed black;"/> $\text{OR } 1^3 = 1 = 1^2$
2	$1 \times 1 \times 1 + 2 \times 2 \times 2 = 9 = 3^2$ <hr style="border-top: 1px dashed black;"/> $\text{OR } 1^3 + 2^3 = 9 = 3^2$
3	$1 \times 1 \times 1 + 2 \times 2 \times 2 + 3 \times 3 \times 3 = 36 = 6^2$ <hr style="border-top: 1px dashed black;"/> $\text{OR } 1^3 + 2^3 + 3^3 = 36 = 6^2$
4	$1^3 + 2^3 + 3^3 + 4^3 = \underline{\quad} = \underline{\quad}$
5	$1^3 + 2^3 + 3^3 + 4^3 + 5^3 = \underline{\quad} = \underline{\quad}$

(b) Write the series that is equal to 55^2 . [2m]

_____ = 55^2

47. A car and bus travelled from Town A to Town B which were 480km apart. The bus set off at 8.00am and travelled at an average speed of 60km/h. The car set off 2 hours later and arrived at Town B 2 hours earlier.

(a) Find the average speed of the car.

(b) At what time did the car catch up with the bus?

Answer: (a) _____ [3m]

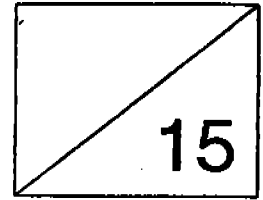
(b) _____ [2m]

END OF SECTION C3

SECTION C4

NAME: _____ (.)

CLASS: Primary 6 _ _____



48. Angela and Betty have 970 stamps altogether. $\frac{1}{6}$ of Betty's stamps is 20 more than $\frac{1}{11}$ of Angela's stamps. What fraction of Angela's stamps is Betty's stamps?

Answer: _____ [5m]

49. The ratio of Sufen's stickers to Seri's stickers was 5:8 at first. After Sufen gave $\frac{2}{5}$ of her stickers to her brother and Seri bought 15 more stickers, Seri had 3 times as many stickers as Sufen. How many stickers did each of them have at first?

Answer: Sufen _____

Seri _____ [5m]

50. At Hougang MRT Station, the ratio of men to women on a NEL train was 5 : 3. At Kovan Station, $\frac{1}{4}$ of the men and some women alighted from the train. The ratio of men to women then became 15 : 8. At Serangoon Station, 30 men and 100 women boarded the train and the ratio of men to women became equal.

- (a) How many passengers were there in the train after the Serangoon Station?
(b) How many women alighted from the train at Kovan Station?

Answer: (a) _____ [2m]

(b) _____ [3m]

END OF PAPER

SIAJ

PRELIMINARY EXAMINATION 2004
MATHEMATICS
PRIMARY SIX

- 1) 4
2) 3
3) 2
4) 2
5) 1
6) 2
7) 2
8) 3
9) 3
10) 4
11) 3
12) 3
13) 4
14) 3
15) 1
16) 8 002 091
17) 1.95
18) 4
19) 34.5
20) 105 cubes
21) 54
22) 0.996
23) 60
24) 1
25)
26) 95 km/h
- 27) 2880
28) $8/5$
29) 90 eggs
30) $33 \frac{1}{3}$
31) $12p - 6$
32) $(100 - 0.9q)$
33) 12
34) 60°
35) 20
36) 34 years old
37) 10 cm^2
38)
- 47) a) 120 km/h
b) 12 p.m.
48) $42/55$
49) Sufen 75
Seri 120
50) a) 360
b) 40
- 39) 6 minutes
40) \$ 0.30
41) 1640
42) a) $1/12$
b) \$ 3000
43) 65 cm^2
44) 10, 10, 9, 8
45) 9.6
46) a) $100 \quad 10^2$
 $225 \quad 15^2$