SA2

Rosyth School
Preliminary Examinations for 2005
MATHEMATICS
Primary 6 (EM1/2)

Name: _____ Total Marks: ____/____

Class: Pr 6_____ Register No. _____ **Duration: 1 h 45 mins**

Date Parent's Signature: _____

Booklet A

Instructions to Pupils:

1. Do not open the booklets A and/or B until you are told to do so.
2. Follow all instructions carefully.
3. This paper consists of 2 booklets, A and B.
4. For questions 1 to 30 in Booklet A, shade the correct ovals on the Optical Answer Sheet (OAS) provided using a 2B pencil.
5. For questions 31 to 46, give your answers in the spaces given in the Booklet B.

	Maximum	Marks Obtained
Booklet A		
Booklet B		
Total		

* This booklet consists of pages

Questions 1 to 5 carry 1 mark each. Questions 6 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. (25 marks)

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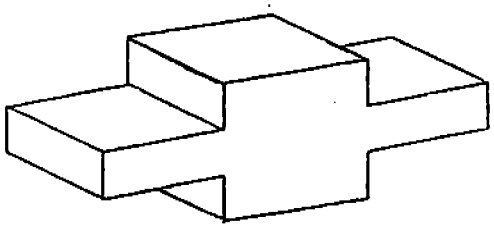
1. What is the value of $1\,200 \times 200$?

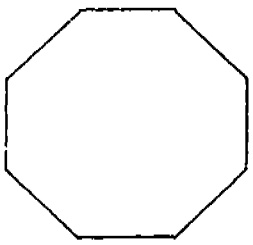
(1) 24 000
(2) 120 000
(3) 120 200
(4) 240 000

2. How many faces does the figure below have ?



(1) 10
(2) 12
(3) 14
(4) 16

3. How many lines of symmetry does the figure below have ?

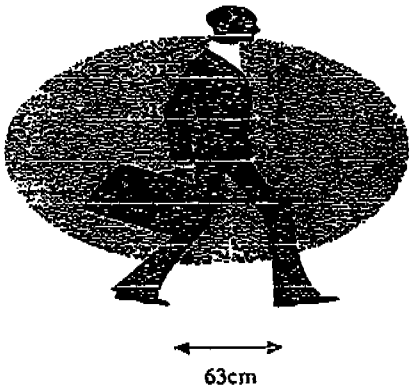


(1) 2
(2) 4
(3) 6
(4) 8

4. A movie has a duration of 2h 20min. If Dickson went for a 4.45pm show, at what time will the movie end ?

(1) 6.55pm
(2) 7.05pm
(3) 7.15pm
(4) 7.25pm

5. Wing Fang's stride is 63cm. In 10 seconds, he takes 7 strides. At this pace, how far can he walk in 1 minute ?



(1) 441 cm
(2) 630 cm
(3) 2 646 cm
(4) 4 410 cm

6. $6 \times 24 = 24 + 24 - 24 +$ ☐
What is the number in the box ?

(1) 42
(2) 72
(3) 96
(4) 120

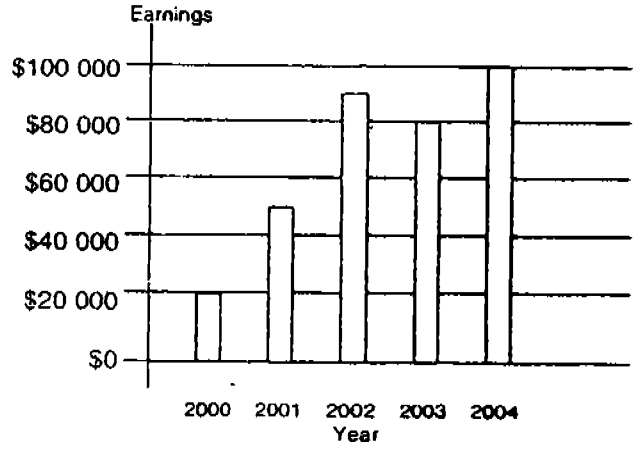
7. Sa Gi has 350 stamps. Chen Lin has $\frac{2}{5}$ of what Sa Gi has. How many more stamps does Sa Gi have than Chen Lin ?

(1) 140
(2) 210
(3) 350
(4) 490

8. Ming Yi cycles at an average speed of 15km/h from her home to Hougang Stadium. If the stadium is $2\frac{1}{2}$ km away from her home, at what time must she set off if she wants to arrive there at 8.00am ?

(1) 6.50am
(2) 7.30am
(3) 7.40am
(4) 7.50am

9. The bar graph below shows the earning made by a furniture company from 2000 to 2004. In which year was the increase in the earnings the greatest ?

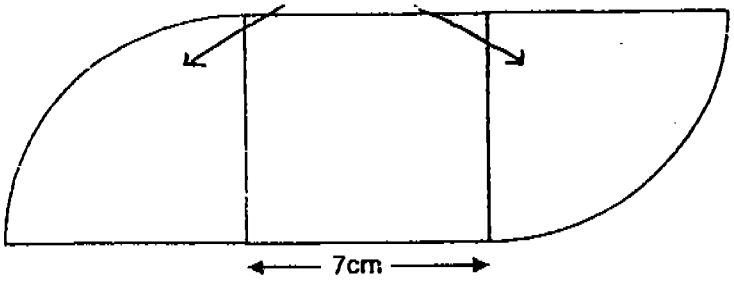


(1) 2000
(2) 2001
(3) 2002
(4) 2004

10. Miss Lee gave a sum of money to Valerie and Amanda in the ratio of 5 : 6. Valerie spent 60% of her share on a bag which cost $15. How much was Amanda's share ?

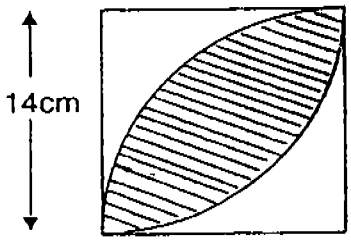
(1) $18 (2) $25
(3) $30 (4) $45

11. The figure below is made up of 2 quarter circles and a square. Find its area.
Take $\pi = \frac{22}{7}$ cm



(1) 77 cm^2 (2) 126 cm^2
(3) 154 cm^2 (4) 203 cm^2

12. The figure below is made up of 2 quarter circles. Find the perimeter of the shaded area. Take $\pi = 3.14$cm



(1) 21.96 cm (2) 43.96 cm
(3) 87.92 cm (4) 99.96 cm

13. Find the value of $\frac{20}{3g - 3}$ if $g = 21$

(1) $\frac{1}{3}$ (2) $\frac{20}{21}$

(3) $1\frac{2}{9}$ (4) $1\frac{1}{5}$

14. Hong Yi has \$40. He spent $\frac{2}{5}$ of it and gave $\frac{1}{4}$ of the remainder to Yvette. How much had he left ?

(1) \$6 (2) \$12

(3) \$18 (4) \$24

15. Haqim and Kelvin had the same amount of money. After Haqim spent \$18 and Kelvin spent \$48, Haqim had 4 times as much money left as Kelvin. How much did each boy have at first ?

(1) \$40 (2) \$58

(3) \$66 (4) \$116

For each question, write your answers in the spaces provided. Give your answers in the units stated. Questions 16 to 35 carry 1 mark each. (20 marks)

16. Round off 8.737 to 2 decimal places.

Ans: _____

17. $\frac{2}{5}$ of the students in United Primary School wear spectacles. The remaining 600 students do not wear spectacles. How many students are there altogether ?

Ans: _____

18. Express 144m as a fraction of 1km 800m.

Ans: _____

19. Milton spent $\frac{3}{5}$ of his money on some fruits and $\frac{1}{3}$ of the remainder on some biscuits. What fraction of his money did he spend on biscuits ?

Ans: _____

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20. A water melon weighs 4 times as much as a coconut. The difference between their masses is 3kg 600g. What is the mass of the water melon ?

Ans: _____kg _____ g

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21. Donovan rollerbladed along a footpath from Point A to Point B. He left Point A at 10.25am and only stopped rollerblading at 12.05pm. How long did he take to reach Point B ?

Ans: _____h_____ min

22. Victoria works 8 hours a day, from Monday to Friday. She earns $4.50 an hour. How much money will she get in a fortnight ?

Ans: $_____

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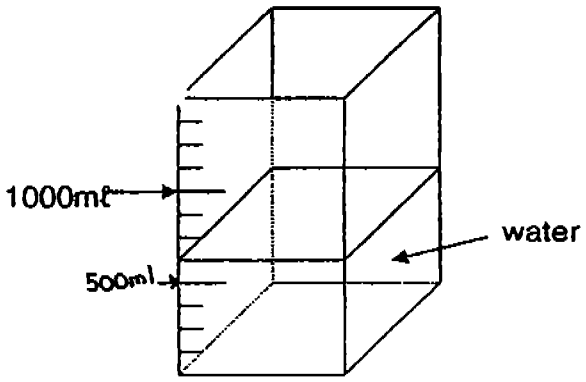
23. How much more water needs to be added into the container below to fill it to the brim ?



Ans: _____ ml

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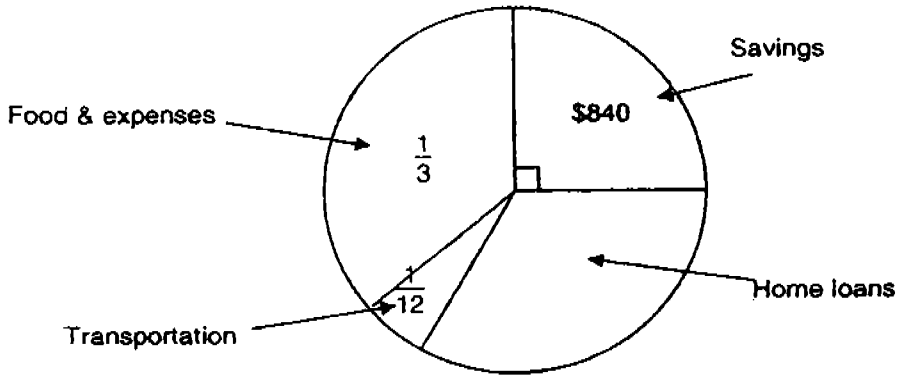
24. Express $1\frac{1}{2}$ as a percentage.

Ans: _____ %

Refer to the pie-chart below and answer Qns 24 & 25.
It shows how Luis spends his salary in a month.



25. How much is Luis' monthly salary ?

Ans: $_____

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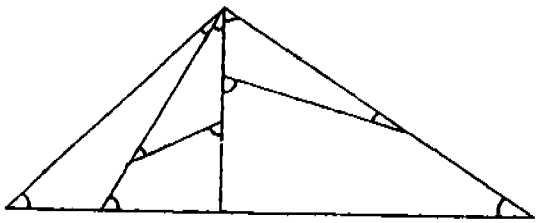
26. How much did Luis spend on transport ?

Ans: $_____

27. Refer to the diagram below.
How many angles inside the diagram below is less than 90°?



Ans: _____ _____

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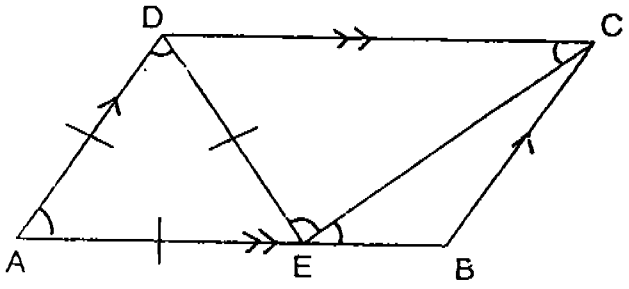
28. ABCD is a parallelogram.
ADE is an equilateral triangle.
∠ DCE is 30° (The figure is not drawn to scale)
Find ∠ DEC.



Ans: _____

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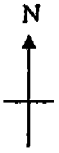
29. There are 40 pupils in a class. At the end of the year, 20% of them left the class and 5 new pupils joined the class. What is the new enrolment of the class ?

Ans: _____ ____

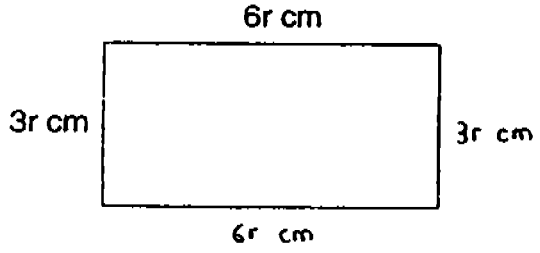
30. I am standing at Grid A1. I am now facing North. I turn towards the East and move 2 boxes. I then turn to face North and move 4 boxes. Then I move 2 boxes in a North-East direction. Finally, I face South and move 1 box.
Where am I ?
Mark your location with an 'X' on the table provided.



8								
7								
6								
5								
4								
3								
2								
1	X							
	A	B	C	D	E	F	G	H

Refer to the diagram below and answer Qn 31 & 32

31. Find the perimeter of the rectangle.



Ans: _____cm

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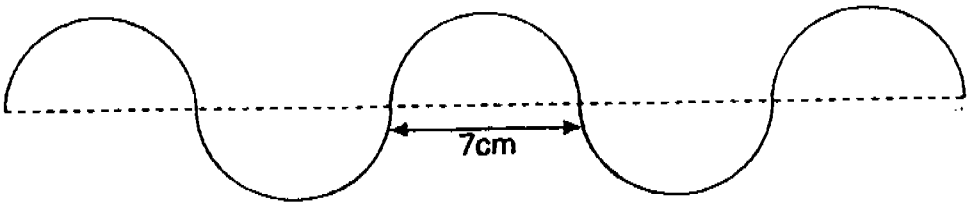
32. If r = 9 cm, find the area of the rectangle.

Ans : _____cm^2

33. The figure below is made up of 5 identical semi-circles. Find ~~its perimeter.~~ the length of the line in bold

Take $\pi = \frac{22}{7}$ cm



Ans: _____ cm

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34. A metal ball with a volume of 1 200cm^3 is placed into an empty tank, 40cm by 30cm by 30cm. How much water is needed to fill the tank to the brim ?

Ans: _____ ℓ

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35. $\frac{3}{4}$ of a number is 20.4

What is that number ?

Ans: _____

Section B2 (55 marks)

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

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36. Zach and Zoe each began reading a novel from Page 1 on 28 August 2005. Zoe reads 5 pages per day. On 9 September 2005, Zach is reading page 104. If Zach reads 3 pages more than Zoe per day, on which date will Zoe be reading page 104?

Ans: _____ _____ _____ [2]

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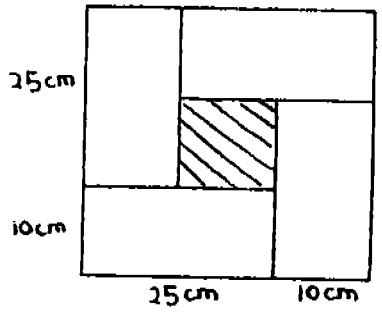
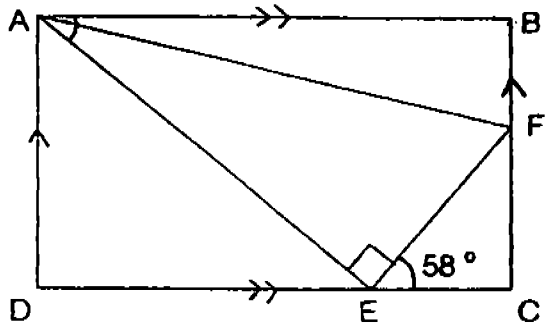
37. The figure below is made up of four identical rectangles, each 25 cm long and 10 cm wide, and a shaded square. What is the area of the shaded square?



Ans: _____ _____ [2]

38. ABCD is rectangle $\angle$ FEC = 58 °. Find $\angle$ EAB. (The figure is not drawn to scale)



Ans: _____ [2]

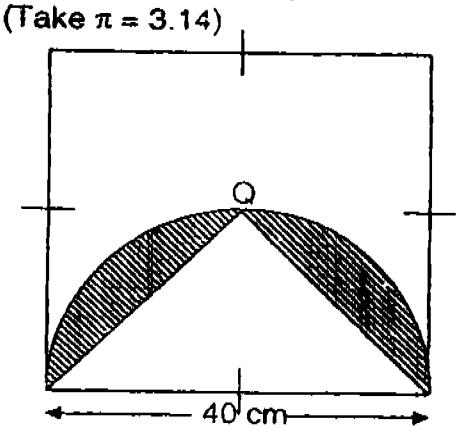
39. Mr Choo is now 4 times as old as his son. In 16 years, he will be twice as old as his son. How old is Mr Choo now?

Ans: _____ [3]

40. There were 30 entries in total from School A and School B for a writing contest. The other entries were from School C. 14 entries were NOT from School A and 20 entries were NOT from School B. How many entries were there altogether?

Ans: _____ [3]

41. The figure shows a semi-circle in a square. Q is the centre of the square. Find the shaded area. (Take $\pi = 3.14$)



Ans: _____ [3]

42. Mr Kassim's monthly salary is $4200 while his wife's monthly salary is $\frac{5}{7}$ of his. Mr Kassim saves $\frac{1}{4}$ of his salary and his wife saves $\frac{1}{5}$ of hers monthly. What is their combined annual savings?

Ans: _____ [4]

43. The average number of members in each of three clubs, Maths Club, Art Club and Science Club is 84. There are 83 members and 90 members in the Maths Club and Art Club respectively.
(a) How many members are there in the Science Club?
(b) If there are 17 more boys than girls in the Science Club, how many boys are there in the Science Club?

Ans: (a) _____ [2]

(b) _____ [2]

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44. Maria uses twenty-four 3-kg bags of rice over an 8-week period. If she decides to buy 5-kg bags of rice instead, how many bags of rice will she use over a 20-week period if the rate of using the rice remains unchanged?

Ans: _____ [4]

45. A box contains more than 26 but less than 54 tennis balls. When the balls are placed in groups of threes, there are 2 left over. When the balls are placed in groups of five, there is 1 ball left over. How many balls are there in the box?

Ans: _____ [4]

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46. Cheng Hoe and Marco cycled from Town P to Town Q at constant speeds. Cheng Hoe took 4 hours to cycle the whole journey while Marco took $2\frac{1}{2}$ hours to cycle $\frac{3}{4}$ of the journey. Find the ratio of Cheng Hoe's speed to Marco's speed. Express your ratio in simplest form.

Ans: _____ [4]

47. Craig and Daliah had some game cards. Craig had 70% of what Daliah had at first. Craig then gave Daliah 60% of what he had. As a result, Daliah had 456 more cards than Craig. How many cards did Craig have at first?

Ans: _____ [5]

48. Study the table below. It shows the number of books sold by a bookshop each day. The shopkeeper accidentally spilled some ink on it such that the first digit of one number and the second digit of another number cannot be read. Find the missing digits.

Day	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Average
Number of books sold	97	89	76	8	6	68	70	83

Ans: Thursday: 8 _

Friday: _ 6 [5]

20

49. Two taps A and B are used to fill a tank measuring 120 cm by 80 cm by 15 cm. If only Tap A is turned on, the tank can be completely filled in 8 minutes. If only Tap B is turned on, the tank can be completely filled in 12 minutes.
(a) How long will it take to completely fill the tank if both taps are turned on at the same time? (Express your answer in minutes and seconds)
(b) Find the rate at which the tank is filled completely if both are turned on. (Express your answer in litres per minute)

Ans: (a) _____ [3]

(b) _____ [2]

20

50. A shop sells stools with three, four or five legs. There are 112 stools for sale. The total number of legs for all these stools is 425. The total number of three-legged and four-legged stools is 3 times the number of five legged stools. How many three-legged stools are there?

Ans: _____ [5]

----- End of paper -----

22

SA2

P6 math (Rosyth) SA2

Date No.

1)	4	11)	2	21)	1 h 40 min	31)	18 r cm
2)	3	12)	2	22)	$360	32)	1458 cm^2
3)	4	13)	1	23)	875 ml	33)	55 cm
4)	2	14)	3	24)	150 %	34)	34.8 l
5)	3	15)	2	25)	$3360	35)	27.2
6)	4	16)	8.74	26)	9280	36)	17 Sept
7)	2	17)	1000	27)	10 angles	37)	225 cm^2
8)	4	18)	2/25	28)	90°	38)	32°
9)	3	19)	2/25	29)	57 pupils	39)	32 yrs old
10)	3	20)	4 Kg 800g	30)	6 K B	40)	32 entries

41) 228 cm^2

42) $19800

43) a) 79 members b) 48 boys

44) 36 bags

45) 41 balls

46) 5 : 6

47) 280 cards

48) Thurs → 85
Friday → 96

49) a) 4 min 48 sec
b) 30 l / min

50) 51 three legged stools.