RAFFLES GIRLS' PRIMARY SCHOOL

SEMESTRAL ASSESSMENT 2
2007

Your Score Out of 100 marks		
	Class	Level
Highest score		
Average score		
Parent's Signature		

Name : _____ ( ) Class: P5__

24 Oct 2007 MATHEMATICS Att: 2 h 15 min

SECTION A (20 marks)

Question 1 to 10 carry 1 mark each. Question 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 your answer (1, 2, 3 or 4) on the OAS provided.

1. 4 hundreds, 3 tenths and 5 thousandths is _____.

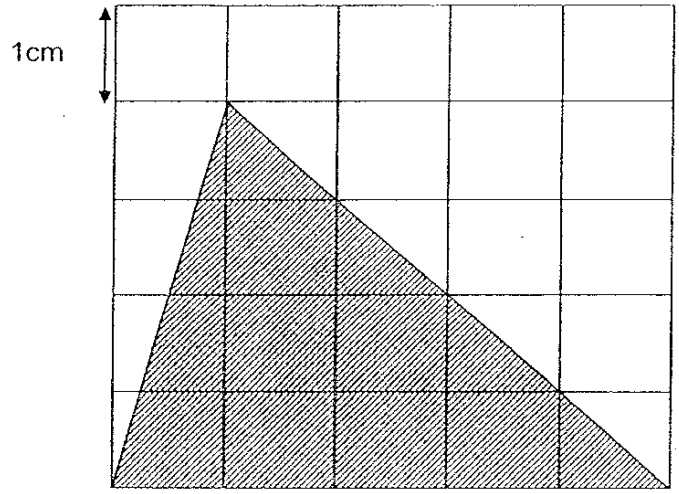
   (1) 400.305
   (2) 400.350
   (3) 430.005
   (4) 430.500 ( )

2. How many tenths are needed to make up $\frac{2}{5}$?

   (1) 5
   (2) 2
   (3) 8
   (4) 4 ( )

31

3. The side of each small square in the figure is 1 cm.
The area of the shaded region is _____ cm^2.



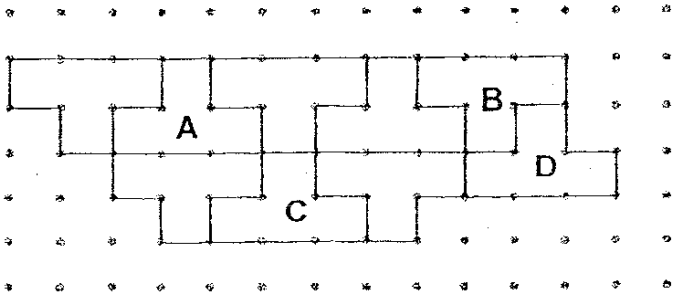
(1) 10.0
(2) 12.5
(3) 14.0
(4) 15.0 ( )

4. David is facing west.
In which direction will he be facing if he turns 315° clockwise.

(1) Northeast
(2) Northwest
(3) Southeast
(4) Southwest ( )

32

5. Which of the following tessellation shape was drawn **wrongly**?



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

6. Round off 87 536 to the nearest thousand.

(1) 87 000
(2) 87 500
(3) 88 000
(4) 88 500 ( )

7. 25% of a number is 100. What is this number?

(1) 25
(2) 50
(3) 400
(4) 500 ( )

8. Express $\frac{45}{100}$ as a decimal.

(1) 45.0
(2) 4.5
(3) 0.45
(4) 0.045 ( )

33

9. A machine printed 14 pieces of stickers in 6 minutes.
How many pieces of stickers can the machine print if it works continuously for 15 minutes?

(1) 30
(2) 32
(3) 35
(4) 40 ( )

10. The average of eight numbers is 45.
The sum of five of the numbers is 110, what is the sum of the other three numbers?

(1) 135
(2) 250
(3) 360
(4) 470 ( )

11. Three fractions are shown below.
Find the difference between the **largest** and **smallest** fractions.

$$\frac{3}{5}, \frac{3}{4}, \frac{2}{3}$$

(1) $\frac{1}{10}$

(2) $\frac{1}{12}$

(3) $\frac{3}{20}$

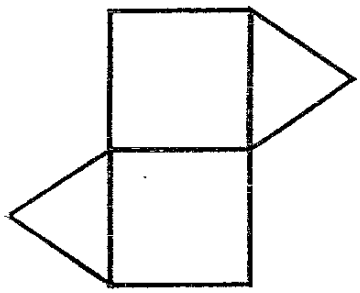
(4) $\frac{1}{15}$ ( )

34

12. The figure below is made up of 2 identical squares and 2 identical equilateral triangles.

A piece of wire, 88 cm long, is used to form the figure.

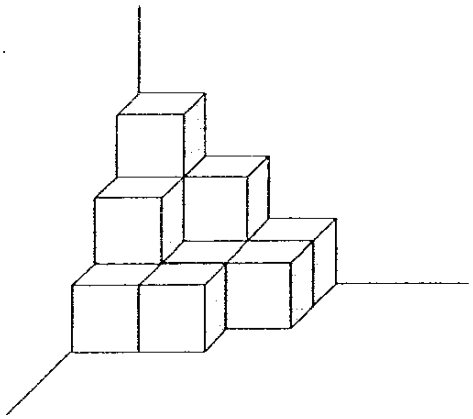
What is the perimeter of the figure?



(1) 64 cm
(2) 72 cm
(3) 77 cm
(4) 99 cm ( )

13. The figure below is made up of 1-cm cubes stacked at the side of the wall.

Find the volume of the figure.



(1) 8 cm^3
(2) 9 cm^3
(3) 11 cm^3
(4) 12 cm^3 ( )

35

14. The charges for a taxi ride are shown in the table below.

Study the table carefully.

Description	Charges
First 1 kilometre	$2.50
Every 200 metres thereafter or less (Up to 10 km)	$0.10
Every 175 metres thereafter or less (after 10 km)	$0.10
Every 15 seconds of waiting	$0.10

Siti's home is 8 km from her workplace.

She took a taxi to work in the morning and the taxi only stopped once at a traffic light for 30 seconds.

How much did she pay?

(1) $3.50
(2) $3.70
(3) $6.00
(4) $6.20 ( )

15. Some factors of 18 can be multiples of 3. How many are there?

(1) 1
(2) 2
(3) 3
(4) 4 ( )

END OF SECTION A

36

SECTION B (30 marks)

Question 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. All diagrams are not drawn to scale. Answers in fractions or ratio must be expressed in the simplest form.

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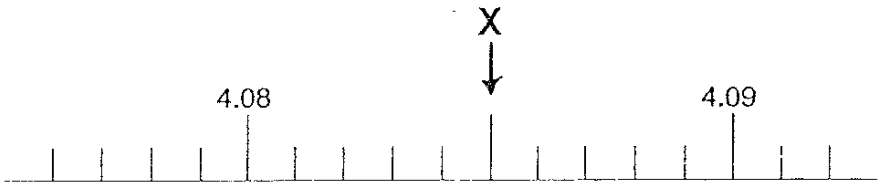
16. What is the value of the point marked "X"? (Give your answer as a decimal)



Ans: _____

17. What is the missing number in the box?

$32.74 \times 24 = 32.74 + 32.74 + 32.74 \times \square$

Ans: _____

18. The capacity of a container was 20 litres.
Some water was poured into the container till it was $\frac{3}{5}$ full.
How many litres of water were poured into the container?

Ans: _____ 1 37

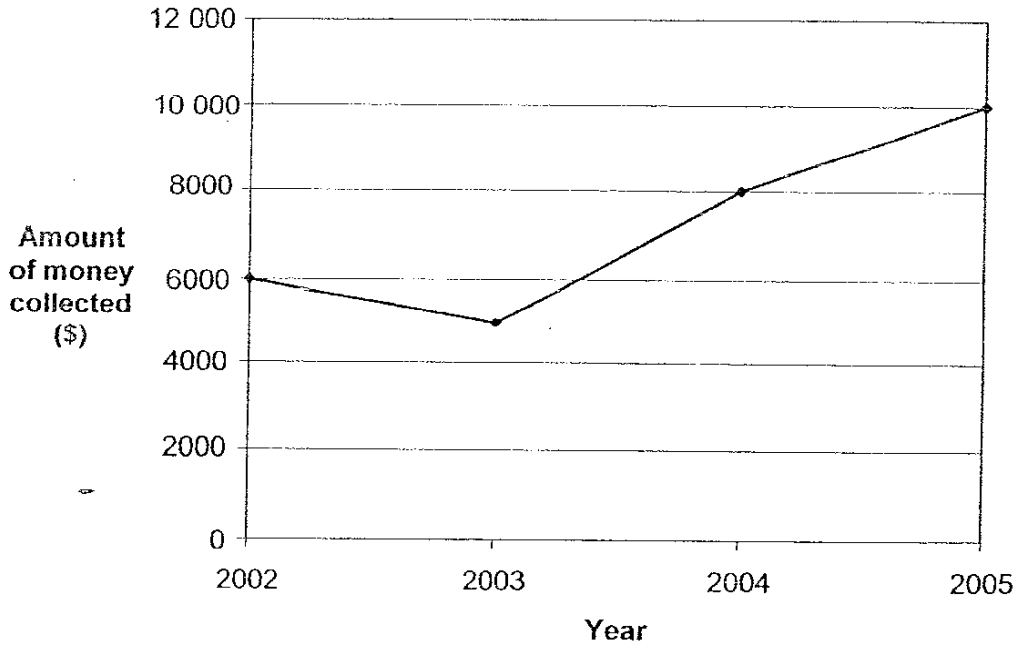
19. Given that

$$\bigcirc + \bigcirc + \bigcirc = \frac{9}{10}$$

What is the value of $\bigcirc$?

Ans: _____

20. The line graph below shows the amount of money collected in a CIP fair from year 2002 to 2005.



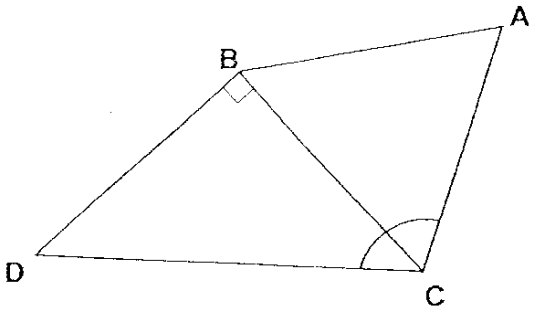
What is the total amount of money collected in 2002 and 2005?

38

Ans: $ _____

21. In the figure below, ABC is an equilateral triangle and BDC is a right-angled isosceles triangle.

Find ∠ DCA.



Ans: _____ ^{0}

22. Ravi can cycle at 500 m per minute.

How many minutes will he take to complete 4.5 km?

Ans: _____minutes

23. Jeremy is 1.65 m tall. He is 17 cm taller than Arun.

What is Arun's height in metres?

Ans: _____ m

39

24. Rachel took two weeks to read a storybook of 126 pages.
She read 70 pages in the first week.
On the average, how many pages did she read a day in the second week?

Ans: _____

25. In a school, the ratio of the number of boys to the number of girls is 1 : 4.
What percentage of the pupils in the school are boys?

Ans: _____ %

40

Question 26 to 35 carry 2 marks each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated. All diagrams are not drawn to scale. Answers in fractions or ratio must be expressed in the simplest form. Marks will be awarded for relevant working.

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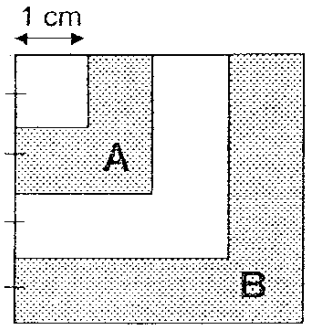
26. The figure below is made up of 4 squares overlapping one another.

What is the ratio of shaded area A to shaded area B?



Ans: _____

27. At a party of 25 guests, each guest drank an average of 0.2 *l* of soda.

The host prepared $10\frac{3}{4}$ *l* of soda.

How many litres of soda were left?

Ans: _____ *l*

41

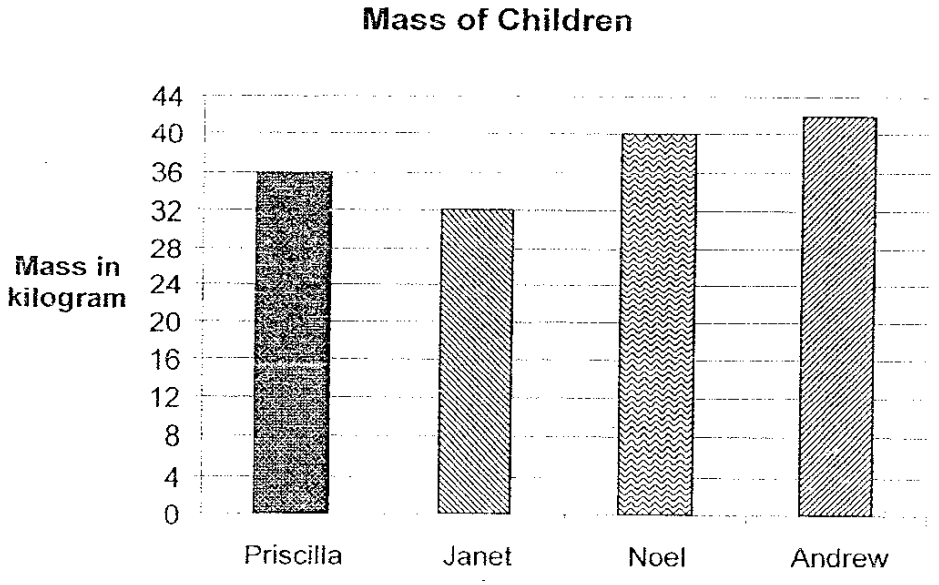
28. The ratio of the length to the breadth to the height of a cuboid is 4 : 2 : 1.
Its length is 12 cm longer than its height.
Find its breadth.

Ans: _____ cm

29. How many 2 cm cubes can be cut out from a wooden block measuring
12 cm by 10 cm by 7 cm?

Ans: _____

30. The graph above shows the mass of four children.



Who weighs 20% less than Noel?

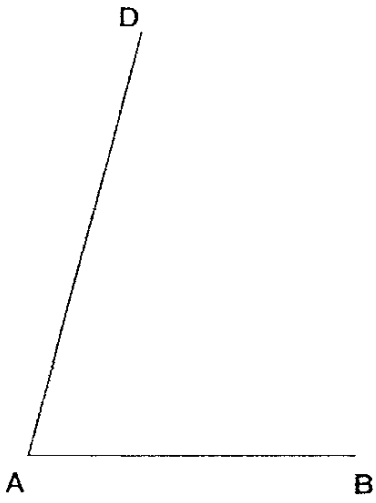
42

Ans: _____

31. The diagram below shows parts of a parallelogram.
DA and AB are sides of the parallelogram.

(a) Measure $\angle DAB$.

(b) Complete the diagram by drawing the other two sides of the parallelogram.
[1m]



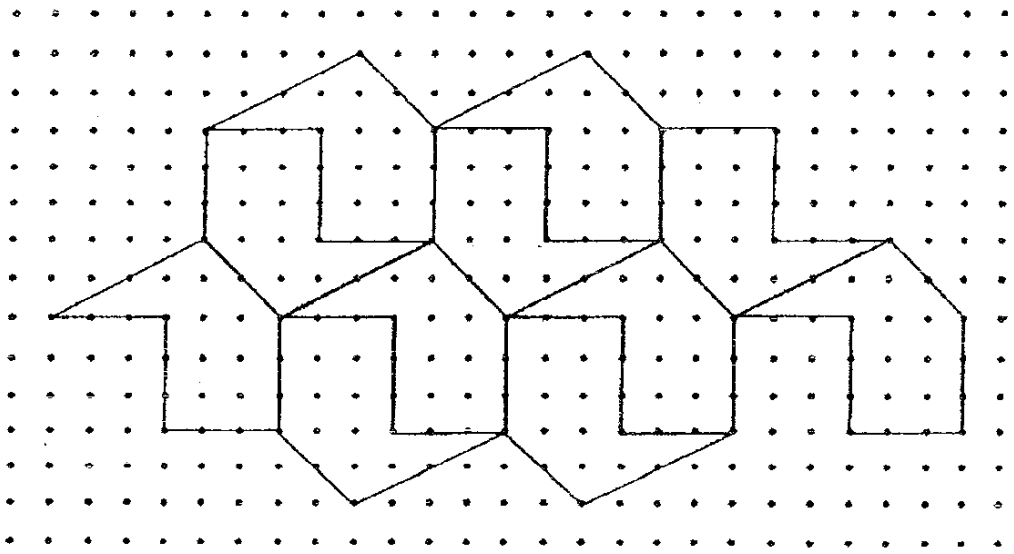
Ans: (a) _____ °

32. The table shows the results of Yong Jun's jumps in the high jump event.
Find the average height he has cleared.

Jump	Height cleared
1st jump	87 cm
2nd jump	92 cm
3rd jump	85 cm

Ans: _____ cm 43

33. Extend the tessellation by drawing **2** more unit shapes in the space provided. **Shade** the **2** unit shapes that you have drawn.



34. During the silent reading, Jane read a story book from page 170 to 208. How many pages of story book did she read?

Ans: _____

35. Find the value of (99 – 9) – 9 x 9 + 99 ÷ 9.

Ans: _____

44

END OF SECTION B

Name: _____ Class: P5 ____ Index No.: _____

SECTION C (50 marks)

For question 36 to 48, show your working clearly in the space provided below each question and write your answer with suitable units in the spaces provided. All diagrams are not drawn to scale. Answers in fractions or ratio must be expressed in the simplest form. Marks will be awarded for relevant working. The number of marks available is shown in brackets [ ] at the end of each question or part-question.

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36. At an electronic shop, a digital camera was sold for $800 and a LCD projector for $1700.

Mr Tan bought the two items during a sale and was given a 20% discount.

How much did Mr Tan pay in total for the two items?

Ans: _____ [3]

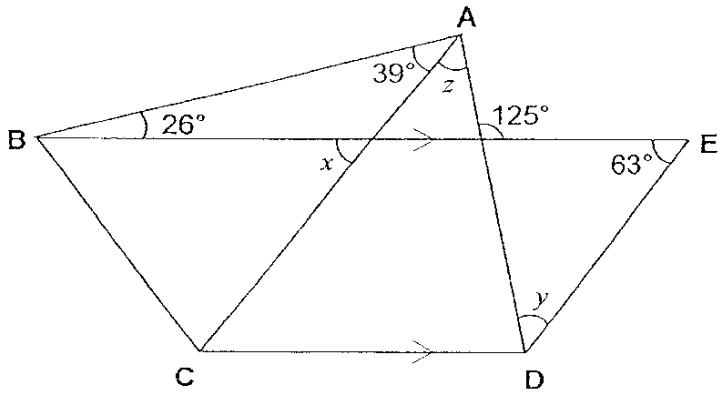
45

37. In the figure below, BCDE is a trapezium.
AC and AD are straight lines. Find

(a) $\angle x$.

(b) $\angle y$.

(c) $\angle z$.



Ans: (a) _____ [1]

(b) _____ [1]

(c) _____ [1]

46

38. A rectangular container measuring 60 cm long, 20 cm wide and 30 cm high is filled with water to a height of 12 cm.

(a) Find the volume of water in the container.

(b) How much **more** water is needed to fill the container completely?

Ans:(a) _____ [2]

(b) _____ [2]

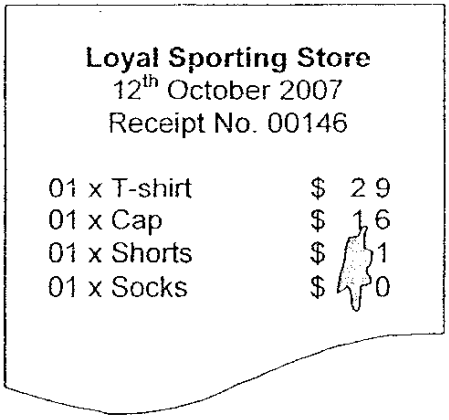
39. Nicole paid $315 for an equal number of cheese cakes and sponge cakes. Each cheese cake cost $1.80 and each sponge cake cost $0.60 less than a cheese cake.

How many pieces of sponge cakes did she buy?

Ans: _____ [3]

48

40. Lisa had ice cream with her friends after shopping for some sports apparel.
She spilt some ice cream on her receipt as shown below.
She spent an average of $19 on the four items.
Given that the shorts cost more than the socks, what could the price of the shorts be?



Loyal Sporting Store
12th October 2007
Receipt No. 00146

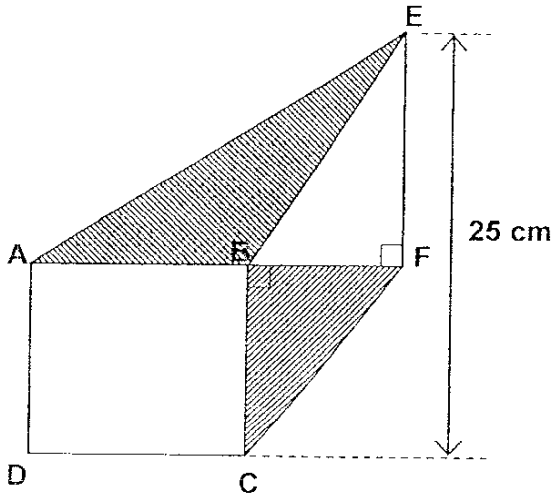
01 x T-shirt	$ 29
01 x Cap	$ 16
01 x Shorts	$ [illegible]1
01 x Socks	$ [illegible]0

Ans: _____ [3]

41. Tap A can fill a tank in 4 minutes.
Tap B can fill the same tank in 6 minutes.
When Tap A and Tap B are turn on at the same time, how many minutes will they take to fill up the same tank?

Ans: _____ [3]

42. In the figure below, ABCD is a square with an area of 100 cm².
ABE and CBF are triangles.
Given that BF = 8 cm, find the area of the shaded region.



Ans: _____ [4]

50

43. Denna and Valerie were given some allowance at first.

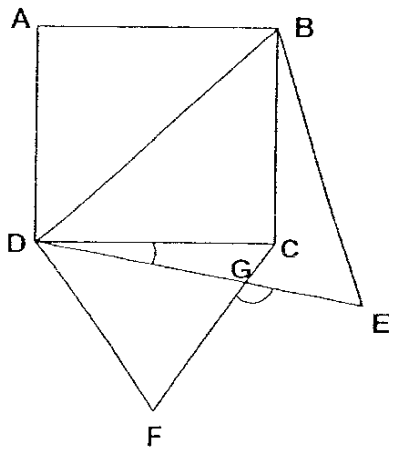
Later, Deena's allowance was reduced by $\frac{1}{4}$ to \$270 while Valerie's allowance was increased by $\frac{1}{5}$ to \$300.

What was the difference between the two girls' allowances at first?

Ans: _____ [4]

51

44. In the figure below, ABCD is a square.
BDE and CDF are equilateral triangles.
Find
(a) $\angle CDG$
(b) $\angle FGE$

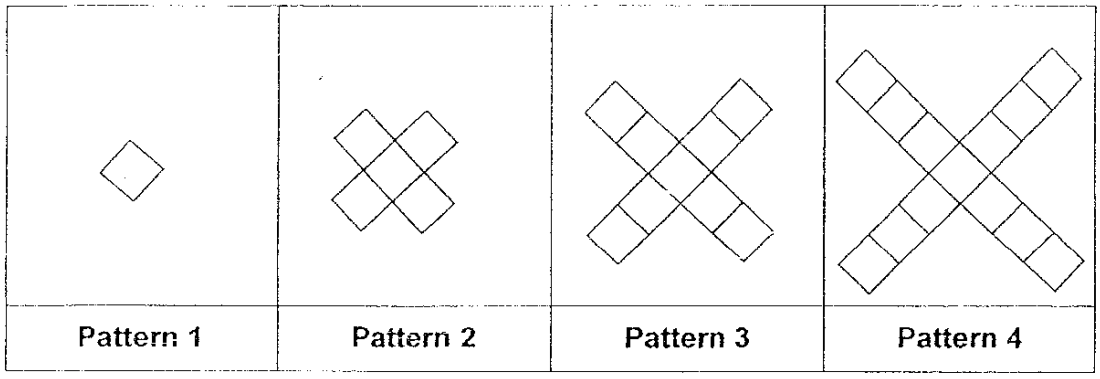


Ans: (a) _____ [1]

(b) _____ [3]

52

45. Jonathan uses identical square tiles to form the patterns below.



Pattern 1	Pattern 2	Pattern 3	Pattern 4

(a) How many square tiles will Jonathan need to use to form pattern 5?

(b) How many square tiles will Jonathan need to use to form pattern 10?

(c) Which pattern number will need 445 square tiles to form?

Ans: (a) _____ [1]

(b) _____ [1]

(c) _____ [3]

46. There are some oranges in 3 boxes, A, B and C.

40% of the number of oranges in Box A is equal to 25% of the number of oranges in Box B.

The number of oranges in Box C is 50% of the number of oranges in Box B.

(a) Express the number of oranges in Box C as a **fraction** of the number of oranges in Box A.

(b) When 40% of the oranges in Box A are taken out and placed in Box C, there will be 36 oranges left in Box A.

How many oranges are there in Box B?

Ans: (a) _____ [1]

(b) _____ [3]

54

47. Company A and Company B hired the same number of workers.
The ratio of number of female workers to the number of male workers hired by Company A and Company B was 1 : 3 and 1 : 4 respectively.

a) Company B had hired 20 more male workers than Company A.
How many workers did Company A hire?

b) Half a year later, equal number of female workers left Company A and B.
The ratio of the number of female workers to the number of male workers hired by Company A and Company B became 2 : 3 and 2 : 5 respectively.
How many female workers left both companies?

Ans: a)_____ [2]

b)_____ [3]

55

48. There were 257 pupils participating in a cross country race at first.
When the number of boys increased by 12 and the number of girls decreased by 5%, the number of pupils participating in the cross country race became 265.
How many boys joined the cross country at first?

Ans: _____ [5]

-End of Paper-
Please check your work carefully ☺

56

Setters: Adeline Khalik, Aubrey Ong, Ho Kai Huat and Wirda Sukor.

Raffles Girls' Primary School

Primary 5 Maths SA2 Exam (2007)

Answer Keys

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

16. **4.085**

17. **22**

18. **12**

19. $\frac{3}{10}$

20. **$16000**

21. **105°**

22. **9 minutes**

23. **1.48m**

24. **8 pages**

25. **20%**

26. **3 : 7**

27. **5.75ℓ**

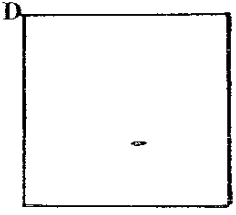
28. **8cm**

29. **90**

30. **Janet**

31a. **75°**

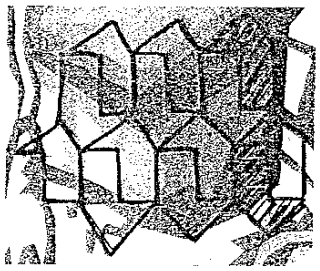
31b. **D**



A **B**

32. **88cm**

33.



34. 39 pages

35. 20

36. 8000 + 1700 = 2500
25000 = 100%
10% = 250
80% = $2000

37a. 39° + 26° = 65°
37b. 125° − 63° = 62°
37c. 125° − 65° = 60°

38a. 60 x 20 x 12 = 14400cm³
38b. 60 x 20 x 18 = 21600cm³

39. 1 sponge cake = $1.80 − 0.60 = $1.20
1 sponge cake + 1 cheese = $1.20 + $1.80
= $3.00
$315 ÷ 3 = 105
105 set = 105 sponge cake
= 105 cheese cake

40. $19 x 4 = $76
29 + 16 = 45
45 + 1 = 46
76 − 46 = 30
20 + 1 = 21

41. Tap A 1min $= \frac{1}{4}$

Tap B 1min $= \frac{1}{6}$

$\frac{1}{4} + \frac{1}{6} = \frac{6}{24} + \frac{4}{24}$

$= \frac{10}{24}$

$1 \div \frac{10}{24} = 1 \times \frac{24}{10}$

$= \frac{24}{10} = 2\frac{4}{10}$

= 2.4 minutes

42. $25 - 10 = 15$

$\frac{1}{2} \times 10 \times 8 = 40$

$\frac{1}{2} \times 10 \times 15 = 75$

$75 + 40 = 115\text{cm}^2$

43.

Deena	Valerie
$270 = 3u$	$6u = 300$
$1u = 90$	$1u = 50$
$4u = 90 \times 4$	$5u = 250$
$= 360$	
$\$(360 - 250) = \$110$	

44a. $90° \div 2 = 45°$

$60° - 45° = 15°$

44b. $180° - 15° = 165°$

$165° - 60° = 105°$

45a. Pattern 1 = 1 x 4 − 3 = 1
Pattern 2 = 2 x 4 − 3 = 5
Pattern 3 = 3 x 4 − 3 = 9
Pattern 5 = 5 x 4 − 3 = 17
17 square tiles

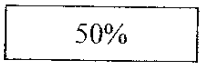
45b. Pattern 10 = 10 x 4 − 3 = 37
37 squares tiles.

45c. 445 + 3 = 448
448 ÷ 4 = Pattern 112

46a. Box A

Box B

Box C



Box C = 8 pts
Box A = 10 pts

$$\text{Fraction} = \frac{8}{10} = \frac{4}{5}$$

46b.

Box A	Box B
60% = 36	24 = 25%
10% = 6	100% = 96 oranges
40% = 24	

47a. 1u = 20
20u = 400 workers

47b. 2u = 10
12u = 120
18u = 180
180 − 120 = 60 female workers

48. 265 − 12 = 253
257 − 253 = 4
4 = 5%
100% = 80
257 − 80 = 177 boys