RAFFLES GIRLS' PRIMARY SCHOOL

SEMESTRAL ASSESSMENT 1
2008
Paper 1

Name :_____( ) Class: P5__

Banded Class: P5__

6 May 2008 MATHEMATICS   Att: 50 min

Your Score Out of **40** marks		
	Class	**Level**
Highest score		
Average score		
Parent's Signature		

SECTION A (20 marks)

Questions 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.
All diagrams are not drawn to scale.
No calculators may be used for this paper

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1. In 870 030, the digit 7 stands for _____.
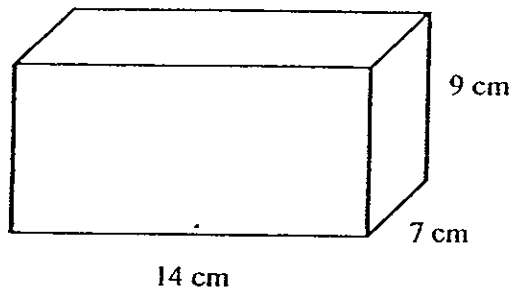
    (1) 70
    (2) 700
    (3) 7 000
    (4) 70 000   (   )

2. Find the value of 2 350 x 80

    (1) 18 080
    (2) 18 800
    (3) 180 800
    (4) 188 000   (   )

3. Find the volume of the cuboid shown below.

9 cm

7 cm

14 cm

(1)   126 cm^3

(2)   882 cm^3

(3)   1134 cm^3

(4)   7938 cm^3

        (   )

4. $5\dfrac{3}{4} = 3\dfrac{\square}{4}$

What is the missing number in the ☐ ?

(1)   5

(2)   11
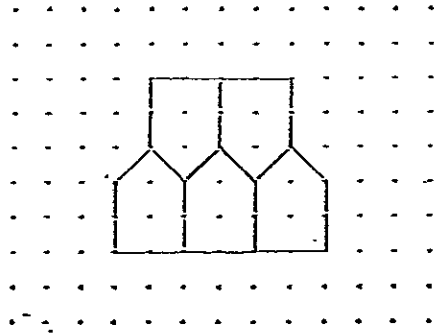
(3)   15

(4)   23

        (   )

5.   Express $7\dfrac{8}{9}$ as an improper fraction.

(1) $\dfrac{63}{9}$

(2) $\dfrac{71}{9}$

(3) $\dfrac{78}{9}$

(4) $\dfrac{87}{9}$
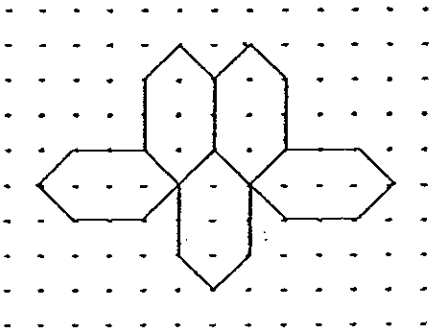
        (   )
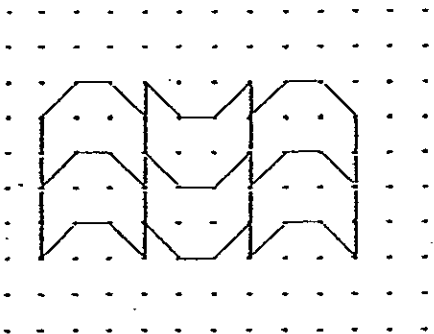
6. Which of the following shape is tessellated **wrongly**?

(1)

(2)

(3)

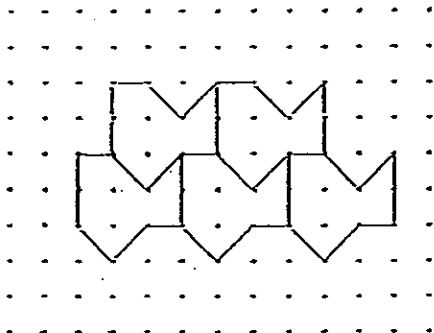(4)

(   )

7. In 8 765. 432, the digit _____ is in the thousandths place.

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

8. Express 0.125 as a fraction in its simplest form.

   (1) $\dfrac{1}{20}$

   (2) $\dfrac{1}{8}$

   (3) $\dfrac{1}{4}$

   (4) $1\dfrac{1}{4}$ (   )

9. ☐ : 8 = 24 : 32

   What is the missing number in the box?

   (1) 6
   (2) 7
   (3) 3
   (4) 4   (   )
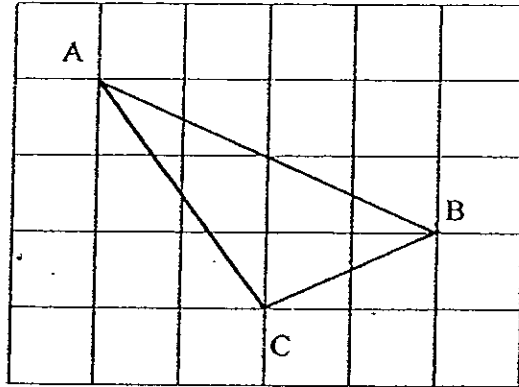
10. The product of 19 912 and 5 when rounded off to the nearest thousand is _____.

    (1) 99 000
    (2) 99 500
    (3) 99 560
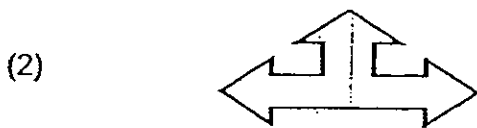   (4) 100 000   (   )

11. The triangle ABC is drawn on a 1-cm grid. Find the area of the triangle.

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

(_)

12. Which of the following figures does **not** have a line of symmetry?

    (1)

    (2)

    (3)

    (4)

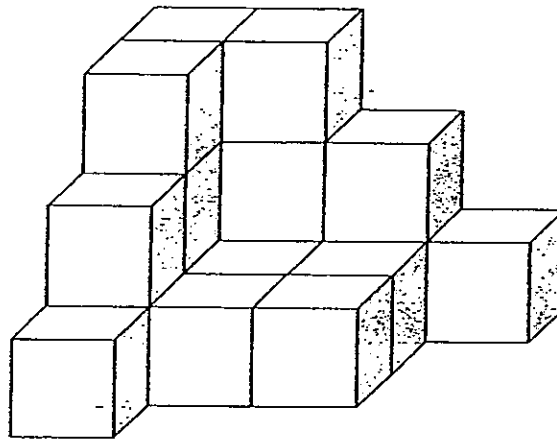(   )

13. What is the product of the first 2 common multiples of 4 and 6?

    (1)   2
    (2)   24
    (3)   288
    (4)   864   (   )

14. The solid below is made up of some identical 1-cm cubes. What is the volume of the solid?

    (1)   13 cm³
    (2)   14 cm³
    (3)   17 cm³
    (4)   19 cm³   (   )

15. Jade reads $\frac{7}{9}$ of a book and had 28 pages left to read. How many pages did the book have altogether?

    (1)   4
    (2)   36
    (3)   126
    (4)   252   (   )

Questions 16 to 25 carry 1 mark each. Questions 26 to 30 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.
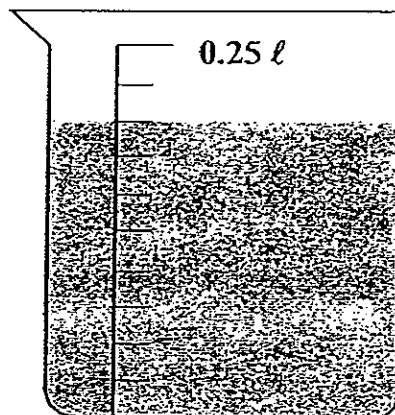
16. Complete the number pattern below:

2 741, 2 730, _____ , 2 705, 2 691, 2 676

Ans: _____

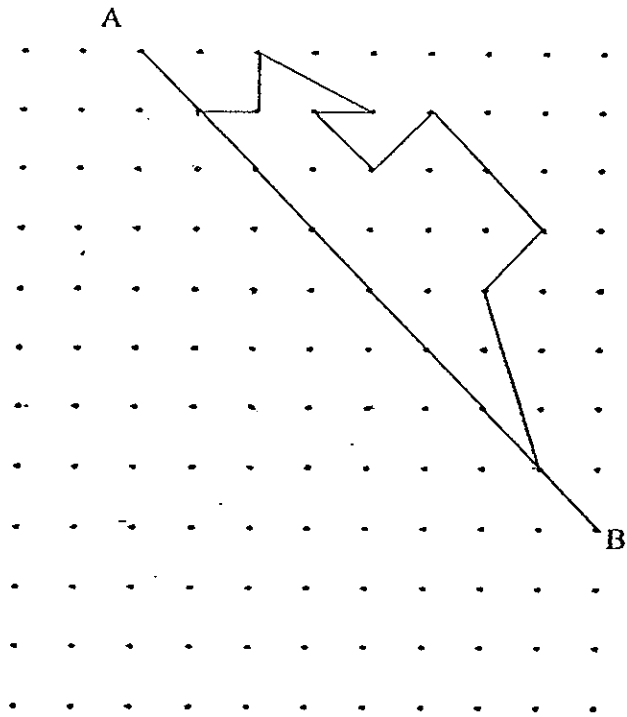17. Write 2 tenths and 67 hundredths as a decimal.

Ans: _____

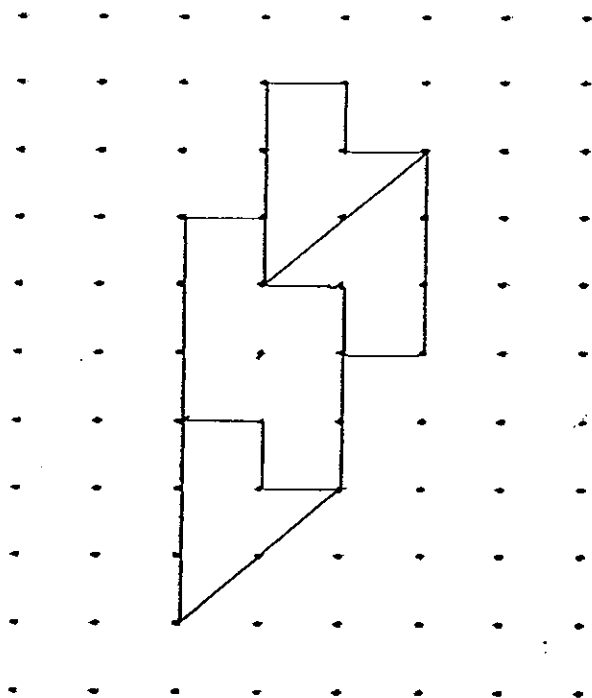18. What is the volume of the water in the beaker?

0.25 ℓ

Ans: _____ ℓ

19. Complete the following figure to make it symmetrical about AB.

20. Mark an X on the unit shape that has been tessellated **wrongly**.

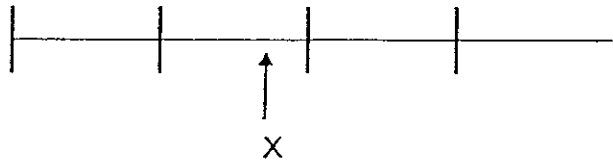21. Find the value of $3\frac{4}{5} + 1\frac{5}{8}$

Ans:_____

22. Express 5. 248 as a mixed number in its simplest form.

Ans:_____

23. If 5 similar pens cost $2.50, how much does 3 similar pens cost?

Ans: $_____

24.   5.63   5.64   5.65   5.66   5.67

X

The number X when rounded off to 1 decimal place is _____.

Ans: _____

25.   In a bus, 24 out of 42 pupils are girls. What is the ratio of the number of boys to the number of girls?
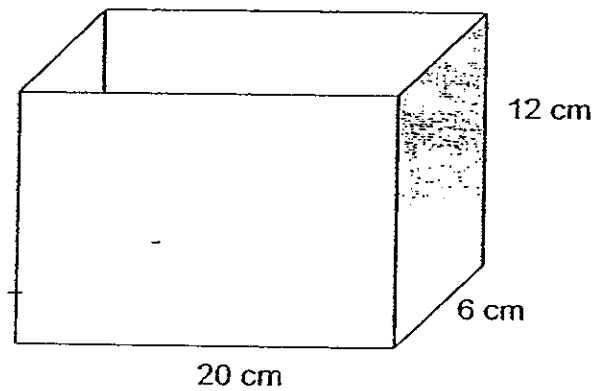
Ans: _____

26.   David had some marbles at first.
After winning 33 marbles from a game, he gave John 28 marbles and was left with 17 marbles.
How many marbles did David has at first?

Ans: _____

27. Find the value of 120 – 60 ÷ (11 + 4) x 2.

Ans:_____
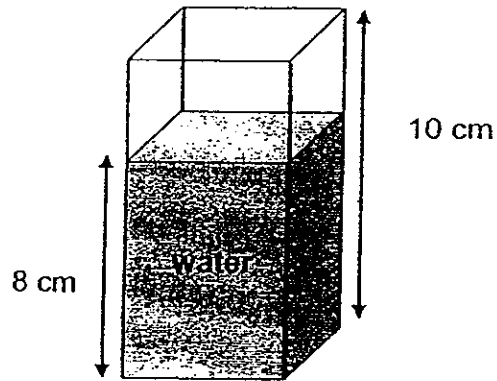
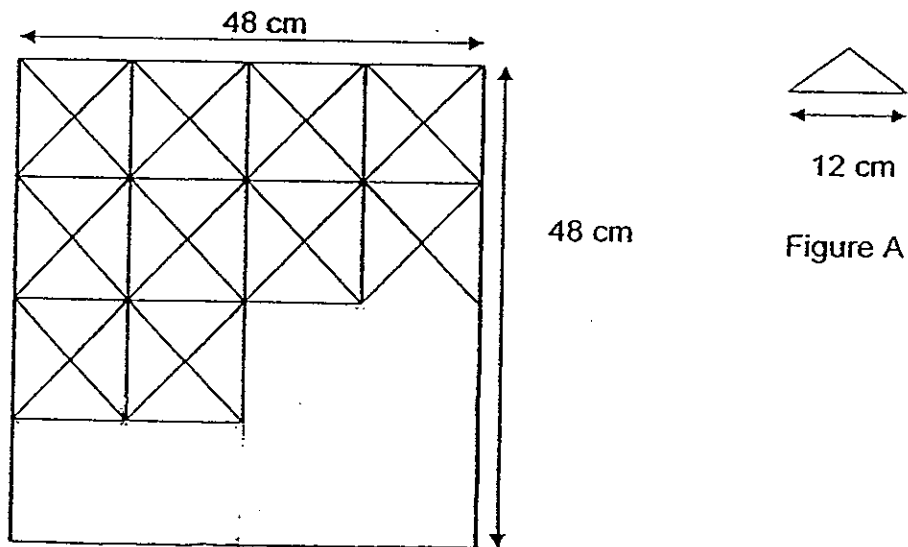28. How many 3-cm cubes can fit into the rectangular tank measuring 20 cm by 12 cm by 6 cm?

12 cm

6 cm

20 cm

Ans:_____

29. Given the volume of the rectangle tank is 5 100 cm³, find the volume of water in the tank as shown below.

10 cm

8 cm

Water

Ans: _____ cm³

30. A table top measuring 48 cm by 48 cm is to be covered by triangular tiles with a base of 12 cm as shown in figure A. How many more tiles are needed to completely cover the table top?

48 cm

48 cm

12 cm

Figure A

·Ans: _____

-End of Paper-
Please check your work carefully ☺

RAFFLES GIRLS' PRIMARY SCHOOL

SEMESTRAL ASSESSMENT 1
2008
Paper 2

Name : _____( ) Class: P5___
Banded Class: P5___

6 May 2008 MATHEMATICS   Att: 1 h 40 min

		Class	Level
Your Score Out of **60** marks			
Highest score			
Average score			
Parent's Signature			

For question 1 to 18, 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.
Calculators can be used.

---

1.   Mr Li ate $\frac{1}{5}$ of the cake and the remaining cake was shared among his 5 children. What fraction of the cake did each child get?

Ans: _____[2]

2.   Find the difference between the 7th multiple of 13 and the largest common factor of 8 and 36.

Ans: _____[2]

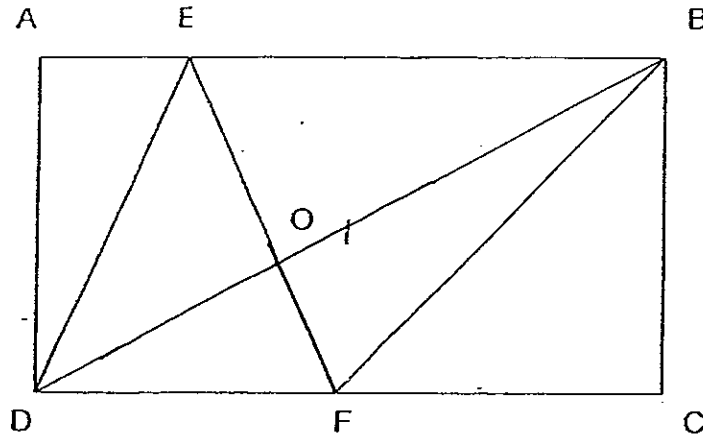3. Arrange the following fractions in ascending order.

$$5\frac{7}{5} \, , \, 5\frac{3}{7} \, , \, 5\frac{5}{3} \, , \, 5\frac{5}{7}$$

Ans: _____[2]

4. In a school, the ratio of the number of teachers to the number of pupils is 1 : 30. The ratio of female teachers to male teachers is 5 : 1. There are 68 more female teachers than male teachers. Find the total number of pupils in the school.
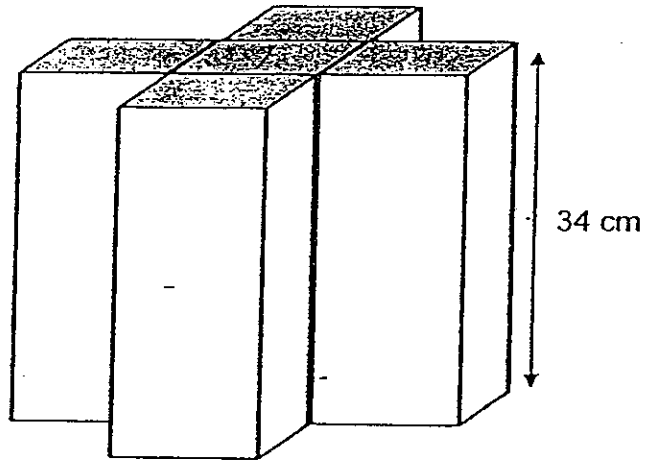
Ans: _____[2]

5. In the figure, ABCD is a rectangle with an area of 714 cm^2. Given that the area of triangle DEF is 336 cm^2, find the area of triangle BCF.

Ans: _____ [2]

6. The solid below is made up of 5 identical cuboids. The shaded area is 780 cm².
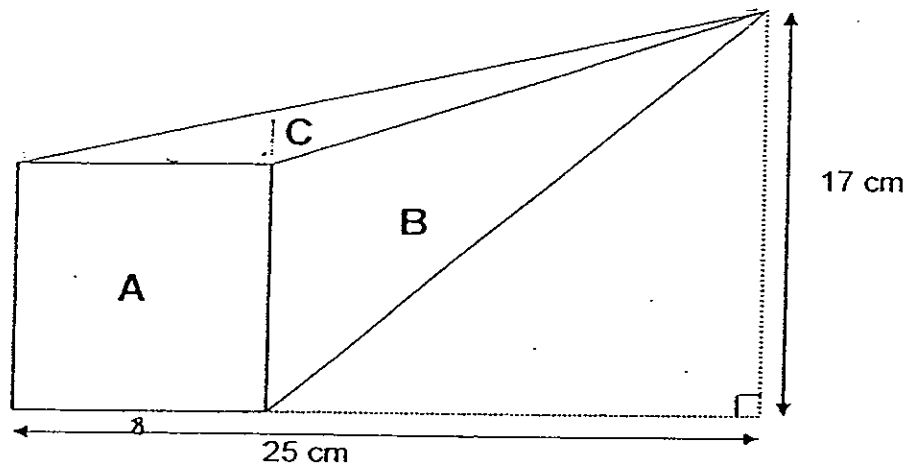   What is the volume of one cuboid?

34 cm

Ans: _____ [3]

7. $\frac{4}{5}$ of the books in a library are English books. The rest of the books are Chinese, Malay and Tamil books in the ratio of 7 : 5 : 4. There are 2400 more English books than the rest of the books. How many Malay books are there in the library?

Ans: _____ [3]

8. The figure below is made up of square A with an area of 64 cm^2 and triangles B and C. Find the total area of triangles B and C.
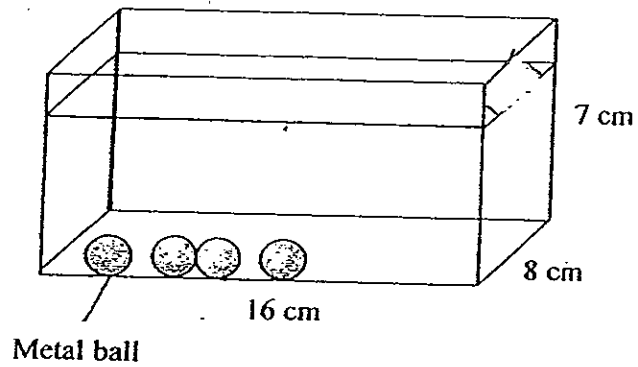

Ans: _____[4]

9. Jane has 3 times as many stickers as Mary.
Devi has half as many stickers as Jane.
Given that all of them have a total of 726 stickers, how many more stickers does Jane have than Mary?

Ans: _____ [3]

10. There were 150 questions in a Science quiz. 2 marks will be deducted for every incorrect answer given, 5 marks will be awarded for every correct answer and no marks will be given for any questions not answered. Mary only managed to answer $\frac{5}{6}$ of the number of questions in the quiz and she scored 359 marks. How many questions did she answer **incorrectly**?

Ans: _____ [4]

11. Four identical metal balls are placed in a tank measuring 16 cm by 8 cm by 7 cm. The tank is then filled with water to the height of 6 cm. When another 2 such metal balls are added into the tank, 250 cm³ of water overflowed. What is the volume of a metal ball?
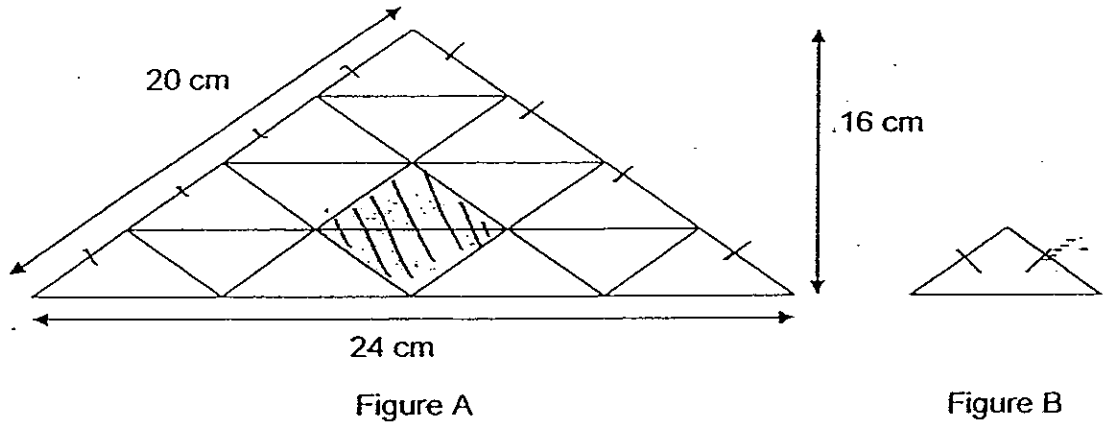

7 cm

8 cm

16 cm

Metal ball

Ans: _____ [3]

12. Lily's amount of money was $\frac{5}{7}$ that of Cindy's at first. When Cindy gave Lily $288, her remaining amount of money was $\frac{11}{13}$ of Lily's. How much did Lily have at first?

Ans: _____ [3]

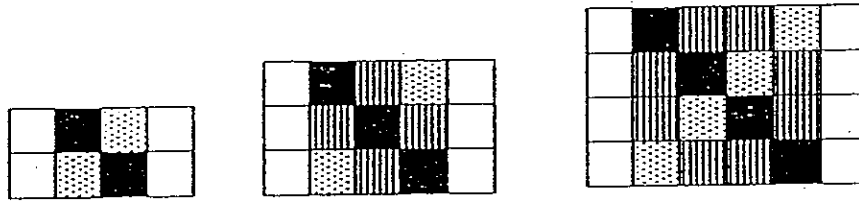13. Figure A is made up of 16 identical isosceles triangles as shown in figure B.

20 cm

.16 cm

24 cm

Figure A   Figure B

a) Find the perimeter of the shaded region.

b) Find the area of the shaded region.

Ans: (a)_____)[1]

(b)_____[3]

14.

Stage 1   Stage 2   Stage 3

Find the value of X, Y and Z in the 25th stage.

Stage	Number of dotted squares	Number of black squares	Number of line squares
1	2	2	0
2	2	3	4
3	4	4	8
4	4	5	16
5	6	6	24
.	.	.	.
.	.	.	.
.	.	.	.
25	X	Y	Z

Ans: X _____[1]

Y _____[1]

Z _____[2]

15. Four staples cost as much as 3 files. 6 staples cost $8.50 more than 2 files. Jill spent $83.30 on an equal number of staples and files. How many files did she buy?

Ans: _____ [4]

16. A book costs $4 more than a pen and $12 less than a watch.
Bob paid a total of $76 for 12 pens, 3 books and a watch.

(a) How much does 1 watch cost?

(b) On the following weekend, there was a sale where a pack of 3 pens were sold for $7. How much could Bob had saved if he bought the same number of pens during the sale?

Ans: (a)_____[3]

(b)_____[2]

17 May had 3 bags of marbles. She transferred $\frac{1}{8}$ of the marbles from bag A to bag B. Then she transferred $\frac{1}{7}$ of the marbles from bag B to bag C. Finally, she transferred $\frac{1}{5}$ of the marbles from bag C to bag A. Now, each bag contains 84 marbles. What was the total number of marbles in Bags A and B at first?
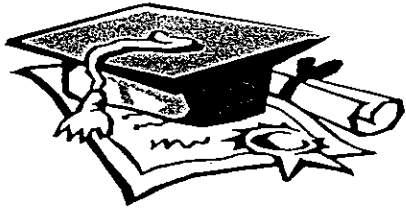
Ans: _____ [5]

18. June and Lynn had some stickers in the ratio 3 : 4. After June bought 12 more stickers and Lynn gave away $\frac{1}{5}$ of her stickers, they had the same number of stickers.

   a. How many stickers did Lynn give away?

   b. What was the total number of stickers the two girls had at first?

Ans: (a) _____ [2]

(b) _____ [3]

-End of Paper-
Please check your work carefully ☺

Setters: Mr Ho Kai Huat, Mdm Neo Hwee Lee, Miss Lim Li Shan

ANSWER SHEET

EXAM PAPER 2008

SCHOOL : RAFFLES GIRLS' PRIMARY SCHOOL
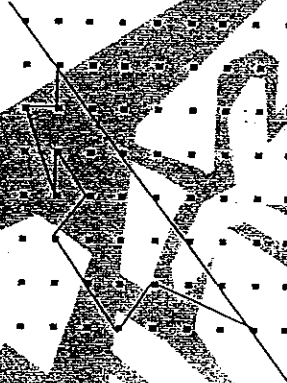SUBJECT : PRIMARY 5 MATHEMATICS

TERM   : SA 1 PAPER 1

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

16)2718   17)0.87   18)0.200   19)

20).

21)$5\frac{12}{40}$ 22)$5\frac{31}{125}$ 23)$1.50   24)5.6   25)3.4

26)12   27)112   28)48   29)4080cm$_3$ 30)25 tiles
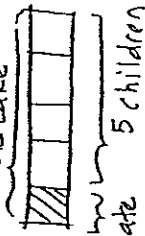
Detail answer key

RAFFLES GIRLS' PRIMARY SCHOOL

SEMESTRAL ASSESSMENT 1
2008
Paper 2

Name : _____ ( ) Class: P5 ____
Banded Class: P5 ___

6 May 2008   MATHEMATICS   Att: 1 h 40 min

	Class	Level
Your Score Out of 60 marks		
Highest score		
Average score		
Parent's Signature		

For question 1 to 18, 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. Calculators can be used.

1. Mr Li ate $\frac{1}{5}$ of the cake and the remaining cake was shared among his 5 children. What fraction of the cake did each child get?

whole cake

3 ate 5 children

$\frac{4}{5} \div 5 = \frac{4}{5} \times \frac{1}{5}$

$= \frac{4}{25}$

Ans: _____ [2]

2. Find the difference between the 7th multiple of 13 and the largest common factor of 8 and 36.

7th multiple of 13 → 7 × 13
= 91

Difference → 91 - 4
= 87

Factors of 8 : 1, 2, ④, 8

Factors of 36 : 1, 2, 3, ④, 6, 9, 12, 18, 36

Ans: _____ [2]

Page 1 of 16

3. Arrange the following fractions in ascending order.

$5\frac{7}{5}$, $5\frac{3}{7}$, $5\frac{5}{3}$, $5\frac{5}{7}$

*smallest as 3 is less than half of 7

↑ 2nd smallest

→ (smallest to biggest)

$5\frac{7}{5} = 6\frac{2}{5}$
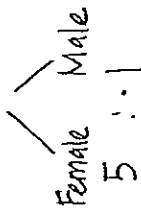
$5\frac{5}{3} = 6\frac{2}{3}$ ← bigger than $6\frac{2}{5}$ as "2" is more than half of its denominator, which is "3".

Ans: $5\frac{3}{7}$, $5\frac{5}{7}$, $5\frac{7}{5}$, $5\frac{5}{3}$ [2]

4. In a school, the ratio of the number of teachers to the number of pupils is 1 : 30. The ratio of female teachers to male teachers is 5 : 1. There are 68 more female teachers than male teachers. Find the total number of pupils in the school.

Teachers : Pupils
    1   :   30

Female   Male
  5   :   1

* females 4 units more than males

4 units → 68
1 unit → 27 · 17
6 units → 27 × 6

(total no. of teachers) = 162 · 102

Total no. of pupils → 162 × 30
= 4860

Ans: 4860   [2]

Page 2 of 16

5. In the figure, ABCD is a rectangle with an area of 714 cm². Given that the area of triangle DEF is 336 cm², find the area of triangle BCF.

Area of $\triangle DEF$ = Area of $\triangle DFB$ = 336 cm² (same base, same height)

Area of $\triangle DBC$ = ½ of the area of rectangle ABCD
= 714 ÷ 2
= 357 cm²

Area of $\triangle BCF$ = Area $\triangle DBC$ − Area $\triangle DFB$
= 357 − 336
= 21 cm²

Ans: __21 cm²__ [2]

6. The solid below is made up of 5 identical cuboids. The shaded area is 780 cm². What is the volume of one cuboid?

34 cm

5 shaded surfaces → 780 cm²
1 shaded surface → 780 ÷ 5
= 156 cm²

Vol. of 1 cuboid → base area × height
= 156 × 34
= 5304 cm³

Ans: __5304 cm³__ [3]

7. $\frac{4}{5}$ of the books in a library are English books. The rest of the books are Chinese, Malay and Tamil books in the ratio of $7:5:4$. There are 2400 more English books than the rest of the books. How many Malay books are there in the library?

English : Others
3 more units
4 : 1

C M T
7 : 5 : 4

3 units → 2400
1 unit → 2400 ÷ 3
= 800 (total no. of C, M and T books).

16 units → 800
1 unit → 50
5 units → 50 × 5
(Malay books) = 250

Ans: __250__ [3]

Page 5 of 16

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8. The figure below is made up of square A with an area of 64 cm² and triangles B and C. Find the total area of triangles B and C.

$8 \times 8 = 64$
1 side of square A → 8 cm.

Base of △B → 8 cm
Height of △B → 25 − 8
= 17 cm
Area of △B = 17 × 8 × $\frac{1}{2}$
= 68 cm²

Base of △C → 8 cm
Height of △C → 17cm − 8 cm
= 9 cm
Area of △C → $\frac{1}{2}$ × 8 × 9
= 36 cm²

Total area of △B and C → 68 + 36
= 104 cm²

Ans: __104 cm²__ [4]

Page 6 of 16

9. Jane has 3 times as many stickers as Mary. Devi has half as many stickers as Jane. Given that all of them have a total of 726 stickers, how many more stickers does Jane have than Mary?

Jane

Mary

Devi

726.

11 units → 726
1 unit → 66
4 units → 66 × 4
= 264

Ans: _____264_____ [3]

Page 7 of 16

10. There were 150 questions in a Science quiz. 2 marks will be deducted for every incorrect answer given, 5 marks will be awarded for every correct answer and no marks will be given for any questions not answered. Mary only managed to answer $\frac{5}{6}$ of the number of questions in the quiz and she scored 359 marks. How many questions did she answer incorrectly?

Number of questions answered → $\frac{5}{6}$ × 150 = 125.

Method ① : Guess and Check

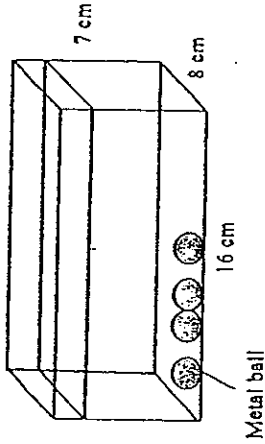| No. of Ans correct	Marks awarded	No. of Ans Incorrect	Marks deducted	Total Marks received	Check
63	63×5=315	62	62×2=124	315-124 = 191	X
65	65×5=325	60	60×2=120	325-120 = 205	X
...	...	...	...	...	
87	87×5=435	(38)	38×2=76	435-76 = 359	✓

Mthd ② : Calculation

① Assume that all the questions answered were correct → 125×5 = 625 marks

② Marks more → 625 - 359 = 266.

③ To replace one correct answer with one wrong answer, marks took away → 5+2 = 7

④ 7 marks → 1 wrong; 266 marks → 266 ÷ 7 = 38 wrong

Ans: _____38_____ [4]

Page 8 of 16

11. Four identical metal balls are placed in a tank measuring 16 cm by 7 cm. The tank is then filled with water to the height of 6 cm. When another 2 such metal balls are added into the tank, 250 cm³ of water overflowed. What is the volume of a metal ball?

7 cm
8 cm
16 cm
Metal ball

Volume of 2 metal balls = Volume of water displaced

$$= (16 \times 8 \times 1) + 250 \, cm^3$$
$$= 128 + 250$$
$$= 378 \, cm^3$$

Volume of 1 metal ball → 378 ÷ 2
$$= 189 \, cm^3$$

Ans: __189 cm³__ [3]

12. Lily's amount of money was $\frac{5}{7}$ that of Cindy's at first. When Cindy gave Lily $288, her remaining amount of money was $\frac{11}{13}$ of Lily's. How much did Lily have at first?

At First,

Lily : Cindy

Total units → 12 { 5 : 7 } × 2

×2 ↓

24   10 : 14

After,

Lily : Cindy

13 : 11   } Total units → 24

3 units → $288
1 unit → $96
10 units → $96 × 10
(Lily at first) = $960

Ans: __$960__ [3]

13. Figure A is made up of 16 identical isosceles triangles as shown in figure B.
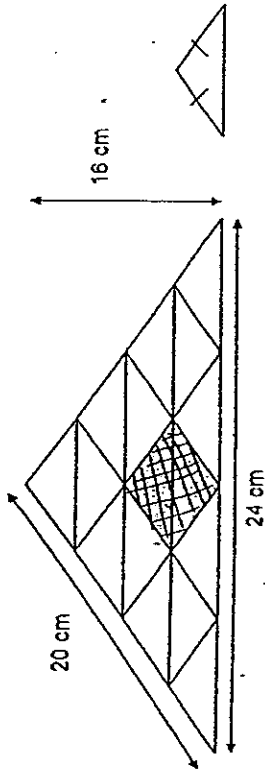
20 cm

24 cm

16 cm

Figure A

Figure B

a) Find the perimeter of the shaded region.

b) Find the area of the shaded region.

(a) 1 side of shaded region → $20 \div 4$
$= 5\ cm$

Perimeter of shaded region → 5×4
$= 20\ cm$

b) Base of 1 shaded $\triangle$ → $24 \div 4$
$= 6\ cm$

Height of 1 shaded $\triangle$ → $16 \div 4$
$= 4\ cm$

Area of shaded region → $2 \times \frac{1}{2} \times 6 \times 4$
$= 24\ cm^2$
$= 24\ cm^2$

Ans: (a) __20 cm__ [1]

(b) __24 cm²__ [3]

14.

Stage 1   Stage 2   Stage 3

Find the value of X, Y and Z in the 25th stage.

Stage	Number of dotted squares	Number of black squares	Number of line squares
1	2	2	0
2	2	3	4
3	4	4	8
4	4	5	16
5	6	6	24
.	.	.	.
25	X	Y	Z

＊Recognising Patterns

① Relation between the stage number and the number of dotted squares.

Odd no. ⇒ Number of dotted sq is always 1 more than the stage number.

Thus, $X = 25 + 1$
$= 26$

② Relation bt. stage no. and no. of black squares :

The no. of black sq. is always one more than the stage no. thus $Y = 25 + 1$

③ Relation bt. stage no. and no. of line sq.

Odd stage number ⇒ Number of line sq is the stage no. multiplied by itself minus 1

Even stage ⇒ No. of line sq is the stage no. multiply by itself

Thus, $Z = 25 \times 25 - 1$
$= 625 - 1$
$= 624$

Ans: X __26__ [1]

Y __26__ [1]

Z __624__ [2]

16. (staples and files)

16. Four staples cost as much as 3 files. 6 staples cost $8.50 more than 2 files. Jill spent $83.30 on an equal number of staples and files. How many files did she buy?

S : staple   F : files .

① 4S = 3F
② 6S = 2F + $8·50 .

①×2 : 8S = 6F
②×3 : 18S = 6F + $25·50

②−① : 10S = $25·50
          1S = $2·55 .

① : 4 × $2·55 = 3F
      $10·20 = 3F
      1F = $3·40 .

1 set (1 file + 1 staple) → $3·40 + $2·55
                                    = $5·95 .

$5·95 → 1 set
$83·30 → 14 sets .
         (14 files + 14 staples)

Ans: _____14_____ [4]

16. (book, pen, watch)
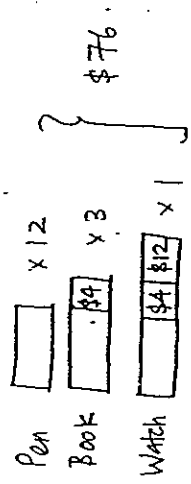
16. A book costs $4 more than a pen and $12 less than a watch. Bob paid a total of $76 for 12 pens, 3 books and a watch.

(a) How much does 1 watch cost?

(b) On the following weekend, there was a sale where a pack of 3 pens were sold for $7. How much could Bob had saved if he bought the same number of pens during the sale?

Pen [   ] x 12
Book [$4] x 3   } $76
Watch [$4 $12] x 1

12 Pens + 3 books + 1 watch = $76
12 units + 3 units + ($4×3) + 1 unit + ($16×1) = $76
12 units + 3 units + $12 + 1units + $16 = $76
16 units + $28 = $76
16 units = $48
1 unit = $3 .

(a) 1 watch → $3 + $4 + $12
              = $19

(b) 3 pens → $7
     12 pens → $28 (sale)

original
1 pen → $3
12 pens → $36 .

More → $36 − $28
      = $8

Ans: (a) _____$19_____ [3]
     (b) _____$8_____ [2]

17 May had 3 bags of marbles. She transferred $\frac{1}{8}$ ③ of the marbles from bag A to bag B. Then she transferred ② $\frac{1}{7}$ of the marbles from bag B to bag C. Finally, she transferred $\frac{1}{5}$ ① of the marbles from bag C to bag A. Now, each bag contains 84 marbles. What was the total number of marbles in Bags A and B at first?

Working Backward :

① After transferring $\frac{1}{5}$ of the marbles, Bag C left with 4 units .

4 units → 84
1 unit → 21   (no. of marbles transferred to Bag A)

No. of marbles in Bag A before transferred → 84 - 21 = 63.

*② ⇒ After transferring $\frac{1}{7}$ of marbles, Bag A left with 7 units.

7 units → 63
1 unit → 9

No. of marbles in Bag A before transferred → 9 × 8 = 72 #

After transferring $\frac{1}{7}$ of the marbles from Bag B to C, Bag B left with 6 units.

6 units → 84
1 unit → 84 ÷ 6 = 14

Total no. of marbles in A and B → 72 + 89 = 161

no. of marbles in B before transferred → 14 × 7 = 98.

no. of marbles in B at first → 98 - 9 = 89 #

Ans: 161   [5]

.18.   June and Lynn had some stickers. After June bought 12 more stickers and Lynn gave away $\frac{1}{5}$ of her stickers, they had the same number of stickers.

a. How many stickers did Lynn give away?

b. What was the total number of stickers the two girls had at first?

At first,

June

Lynn

After,

June

Lynn

(a) Lynn gave away → 12 × 4
   = 48

(b) 1 big unit → 12 × 5
   = 60

Total at first → 7 big units

7 × 60 = 420

Ans: (a) $\underline{48}$ [2]

(b) $\underline{420}$ [3]

-End of Paper-

Please check your work carefully ☺