Math Teacher:

RAFFLES GIRLS' PRIMARY SCHOOL
PRELIMINARY EXAMINATION
MATHEMATICS (PAPER 1)
PRIMARY 6

Name: _____ ( )

Form Class: P6 _____

Date: 25 August 2015 **Duration: 50 min**

Your Score (Out of 100 marks)	Parent's Signature Date:
Paper 1 (Out of 40 marks)	
Paper 2 (Out of 60 marks)	
Overall (Out of 100 marks)	

INSTRUCTIONS TO CANDIDATES

1. Do not turn over this page until you are told to do so.
2. Follow all instructions carefully.
3. Answer **ALL** questions and show all working clearly.
4. **NO** calculator is allowed for this paper.

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.

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1. The value of the digit 5 in 657 841 is _____.

   (1) 500

   (2) 5 000

   (3) 50 000

   (4) 500 000

2. $$\frac{9}{24} = \frac{15}{\boxed{?}}$$

   What is the missing number in the box?

   (1) 18

   (2) 30

   (3) 40

   (4) 48

3. In the numeral 7.539, the digit '3' stands for _____.

   (1) 3 tens

   (2) 3 tenths

   (3) 3 hundredths

   (4) 3 thousandths

4. Express 4.032 litres in millilitres.

(1) 0.4032 ml

(2) 40.32 ml

(3) 403.2 ml

(4) 4032 ml

5. The length of a rectangle is three times as long as its breadth.
Find the perimeter of the rectangle given that the length is 6 cm long.

(1) 12 cm

(2) 16 cm

(3) 24 cm

(4) 48 cm

6. A number becomes 50 000 when rounded off to the nearest thousand.
Which one of the following could the number be?

(1) 49 187

(2) 49 783

(3) 50 978

(4) 51 879

7. A tank was completely filled with water. After pouring out 210 ml of water from the tank, it was $\frac{6}{7}$ filled with water. What was the capacity of the tank?

(1) 245 ml

(2) 1050 ml

(3) 1260 ml

(4) 1470 ml

8. Express $3\frac{1}{20}$ as a decimal.

(1) 3.01

(2) 3.05

(3) 3.1

(4) 3.5

9. An examination lasted for 105 minutes. If the examination ended at 11 a.m., what time did it start?

(1) 9.15 a.m.

(2) 9.55 a.m.

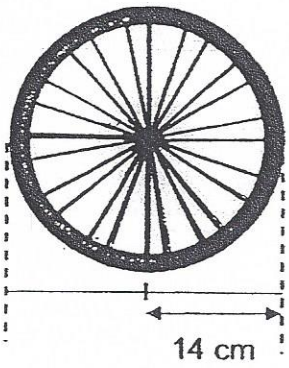
(3) 12.05 p.m.

(4) 12.45 p.m.

10. The radius of a wheel is 14 cm.

What is the distance that it will cover if it makes 10 turns?

(Take π as $\frac{22}{7}$)



(1) 440 cm

(2) 880 cm

(3) 2464 cm

(4) 6160 cm

11. There were 650 people at a carnival. 60% of them were adults and the rest of them were children. How many children were there at the carnival?

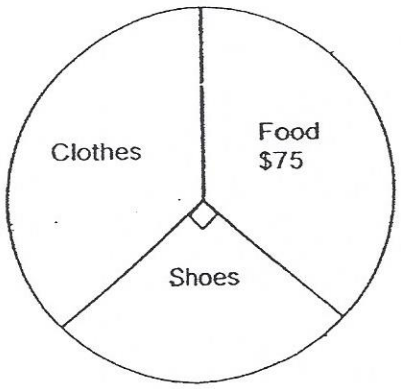
(1) 104

(2) 156

(3) 260

(4) 390

12. The pie chart below shows how Mary spent her money on Sunday.
She spent $225 more on clothes than on food.
How much did she spend on shoes?



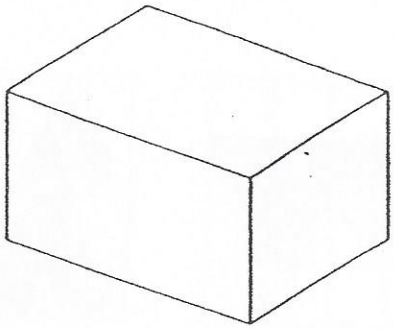
(1) $ 125

(2) $ 300

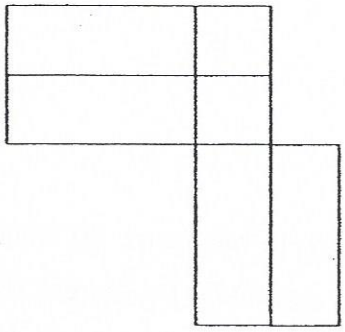
(3) $ 375

(4) $ 500

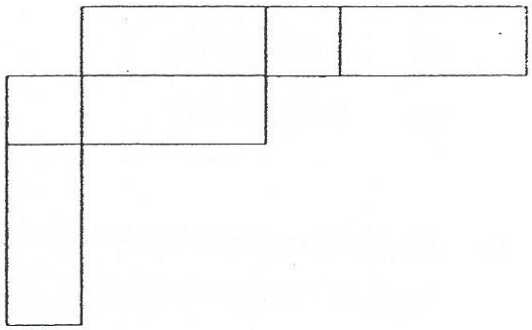
13. The figure below shows a cuboid.



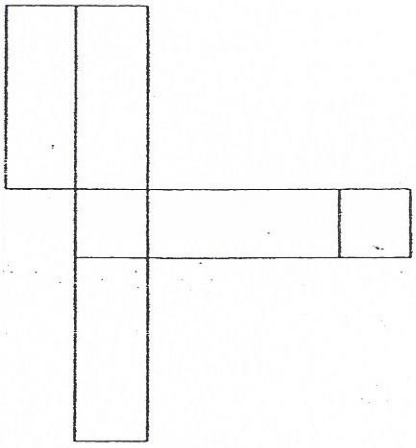
Which one of the following is a net of the cuboid?



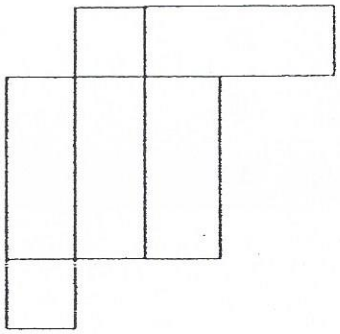
(1)



(2)

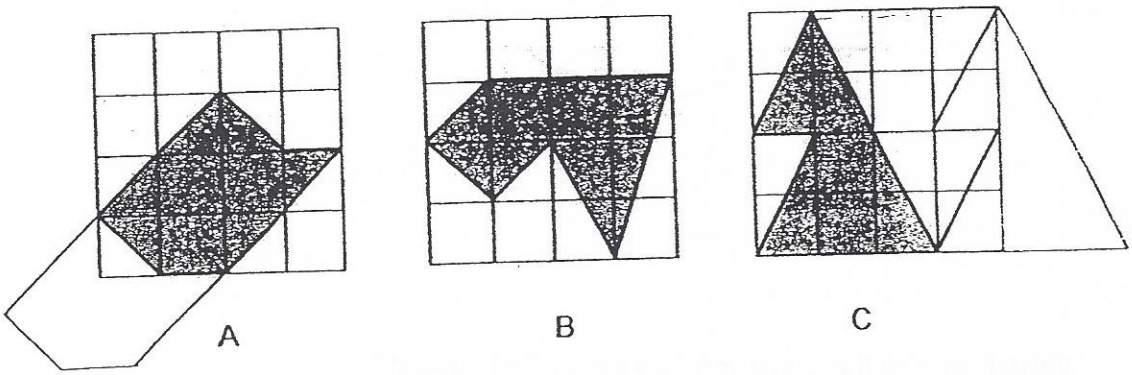


(3)



(4)

14. There are 3 unit shapes below. Which one of the shapes below can be tessellated?



A B C

(1) A only

(2) B only

(3) A and C only

(4) B and C only

15. Mr Seah owns a farm in Lim Chu Kang. In his farm, 30 chickens can lay 63 eggs in 7 days on average. How many eggs will he expect 10 chickens to lay in 10 days on average?

(1) 9

(2) 11

(3) 30

(4) 33

SECTION B (20 marks)

Questions **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.

16. Arrange the following numbers from the smallest to the largest.

84 326 , 83 264 , 86 432 , 86 342

Ans: _____ , _____ , _____ , _____

17. What is the missing number in the box?

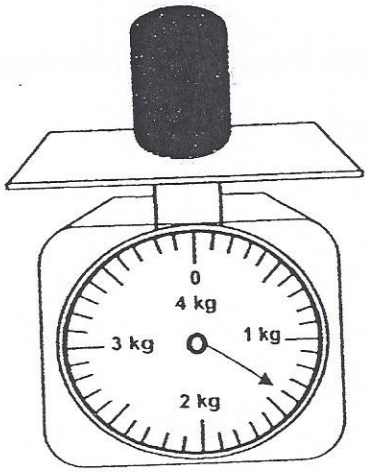
$\boxed{?} \times \frac{1}{8} = \frac{3}{4} \div 2$

Ans: _____

18. Find the value of 0.2 x 90.

Ans: _____

19. The picture below shows the mass of a cylinder. What is the mass of the cylinder in kilograms and grams?

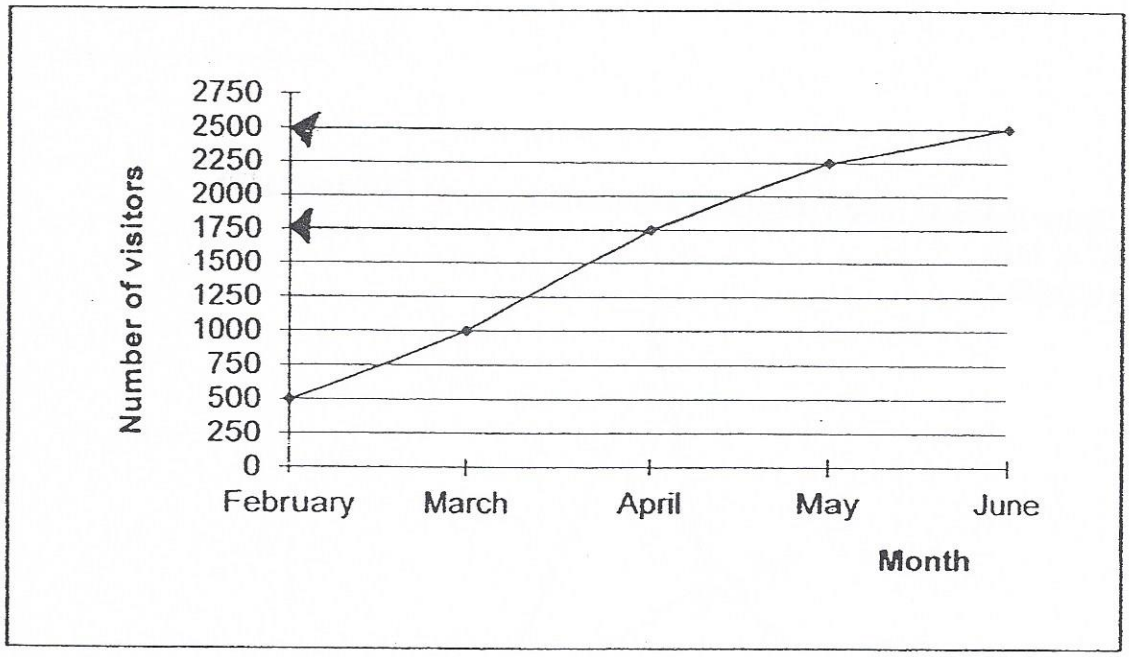


Ans: _____ kg _____ g

20. The length of a cube is 9 cm. What is the volume of the cube?

Ans: _____ cm^3

21. The line graph below shows the number of visitors in a shopping mall from February to June.



What is the increase in the number of visitors from April to June?

Ans: _____

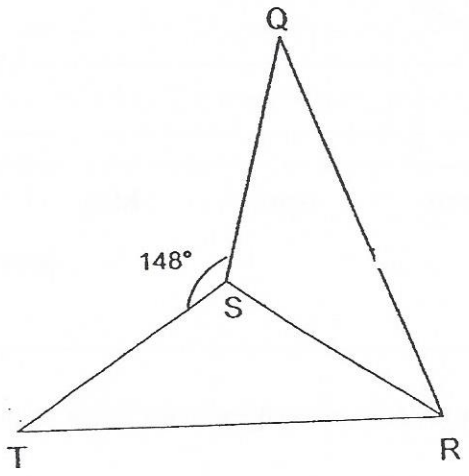
22. Express $2 as a percentage of 40-cents.

Ans: _____%

23. Express 8.25 as a fraction in its simplest form.

Ans: _____

24. The figure below is made up of two identical triangles, TSR and QSR.
$\angle QST = 148°$.
Find $\angle QSR$.



Ans: _____ °

25. Danika's age is 4 times of Eddy's age and Eddy's age is $\frac{3}{7}$ of Fandi's age. Find the ratio of Danika's age to Eddy's age to Fandi's age. Express your answer in its simplest form.

Ans: _____

Questions **26** to **30** carry 2 marks each. Show your working clearly in the space provided for each question and write your answers in the space 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.

26.

MAGIC SHOW

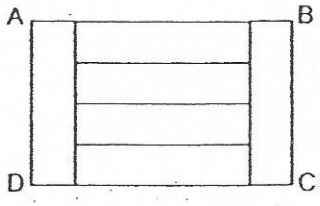
Tickets at $20 each

$3 discount for every 4 tickets bought

Jacqueline is buying 6 tickets for the magic show. How much does she need to pay?

Ans: $ _____

27. Rectangle ABCD is divided into 6 identical small rectangles as shown below. Given that the perimeter of rectangle ABCD is 80 cm, find the area of one small rectangle.



Ans: _____ cm^2

28. The table below shows the charges for renting a bicycle

First hour	$\$2k$
Every subsequent hour	$\$(k + 3)$

Rachel rented one bicycle for 3 hours. How much did she pay for the rental? Give your answer in terms of k.

Ans: \$ _____

29. Every month, Gary saved \$320 of his salary and spent the rest. In December, his spending increased by 4% and he only managed to save \$240. How much was his salary?

Ans: \$ _____

30. Tina had 22 shelves with equal number of books on each shelf. She removed all the books from 12 of the shelves and placed them equally onto the remaining shelves. She found that these remaining shelves had 42 more books each. How many books were on each shelf at first?

Ans: _____

-End of Paper-

Please check your work carefully ☺

Setters: Chong JQ
Ee BY
J Seto
Lee SK

Math Teacher:

RAFFLES GIRLS' PRIMARY SCHOOL
PRELIMINARY EXAMINATION
MATHEMATICS (PAPER 2)
PRIMARY 6

Name: _____ ( )

Form class: P6 _____

Date: 25 August 2015 **Duration: 1 h 40 min**

Your Score (Out of 60 marks)	

INSTRUCTIONS TO CANDIDATES

1. Do not turn over this page until you are told to do so.
2. Follow all instructions carefully.
3. Answer **ALL** questions and show all working clearly.
4. The use of calculator is allowed for this paper.

Questions **1** to **5** carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

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1. There were 132p marbles in a box. The marbles are divided between Kathy and Sandy in the ratio of 4: 7.

   Express the number of marbles Sandy received in terms of p.

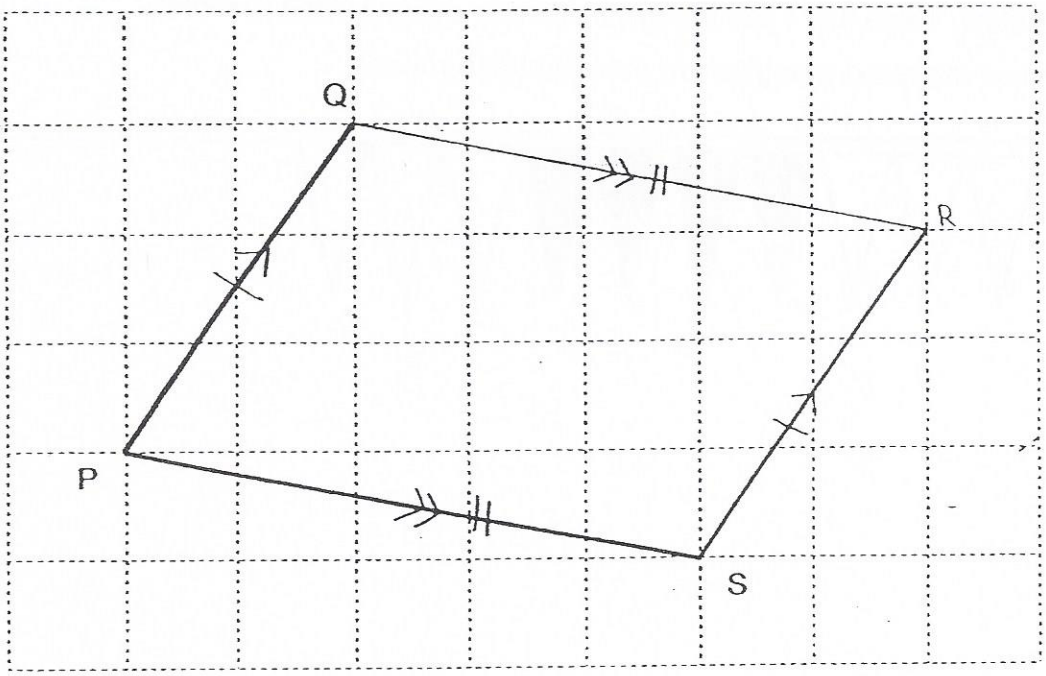
Ans: _____ [2]

2. There were 950 visitors at an art exhibition on Saturday. The number of visitors increased by 20% on Sunday.

   Find the number of visitors at the art exhibition on Sunday.

Ans: _____ [2]

3. PQ and PS are two sides of a parallelogram PQRS. Complete the parallelogram by drawing the other two sides in the square grid below. [2]

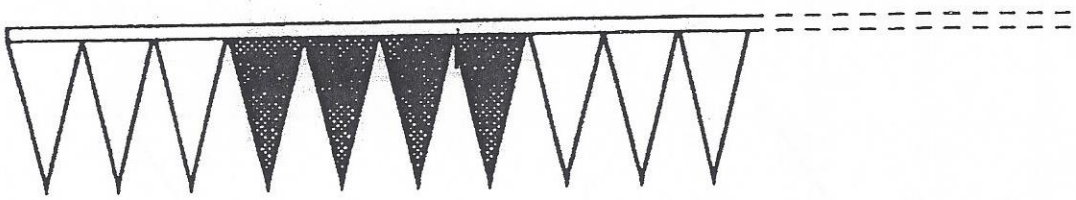


4. Arrange the following fractions from the largest to the smallest.

$\frac{64}{100}$, $\frac{5}{7}$, $\frac{11}{20}$, $\frac{3}{5}$

Ans: _____, _____, _____, _____ [2]

5. In celebration of National Day, a school stage is decorated with a banner made up of 335 red and white triangles. One end of the banner is shown below. There are 4 red triangles between every 3 white triangles.
How many red triangles are there on the banner?



Ans: _____ [2]

For questions **6** to **18**, show your working clearly and write your answers in the spaces provided. The number of marks available is shown in brackets [ ] at the end of each question or part-question. (50 marks)

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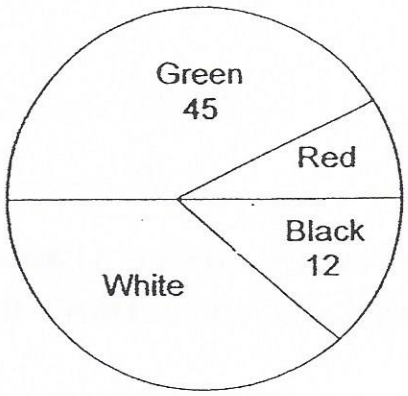
6. The pie chart shows the number of marbles in a box.

$\frac{1}{2}$ of the marbles are green and red.

The number of black marbles is $\frac{2}{7}$ the number of white marbles.



Express the number of red marbles as a fraction of the total number of marbles in the box. Leave your answer in the simplest form.

Ans: _____ [3]

7. One pair of jeans and 3 identical shirts cost \$484. The pair of jeans costs \$3m more than a shirt.

(a) Express the cost of a shirt in terms of m.

(b) Given that $m = 16$, find the cost of a pair of jeans.

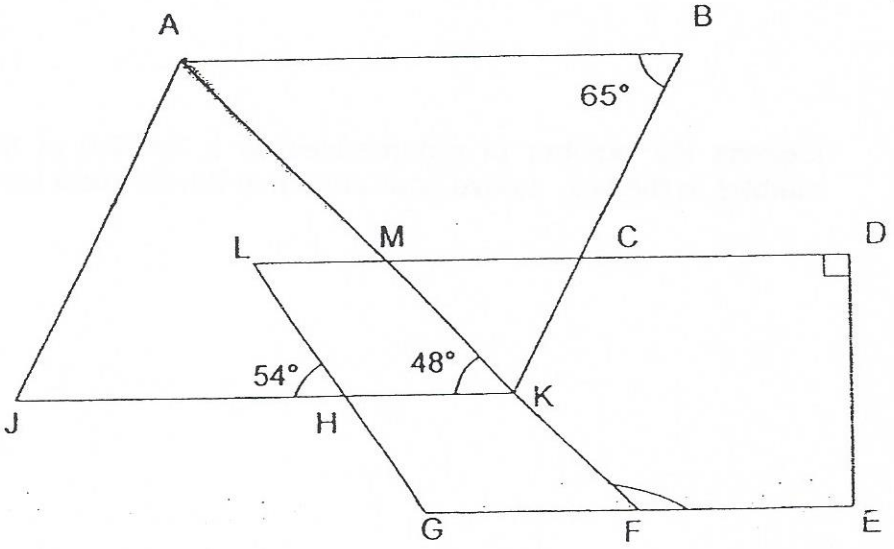
Ans: (a) _____ [1]

(b) _____ [2]

8. In the diagram below, ABKJ is a parallelogram, LDEG is a trapezium and line AF is a straight line. Given that LD//JK, $\angle ABC = 65°$, $\angle MKH = 48°$, $\angle LHJ = 54°$. Find

(a) $\angle JAK$

(b) $\angle KFE$



Ans: (a) _____ [1]

(b) _____ [2]

9 There are 540 children in School A and School B. $\frac{2}{5}$ of the children in School A and $\frac{1}{4}$ of the children in School B are girls. Given that there is an equal number of boys in both School A and School B, how many girls are there in School A?

Ans: _____ [3]

10. Mrs Goh had some $2 notes and some $10 notes. She had 95 notes altogether. When she exchanged all the $10 notes for $2 notes, she found that she had 175 notes. How many $2 notes did she have at first?

Ans: _____ [3]

11. Maria, Nelly and Olivia bought a present for their mother. The ratio of the amount paid by Maria to the total amount paid by Nelly and Olivia was 1 : 4. The amount paid by Nelly to the total amount paid by Maria and Olivia was 3 : 5. If Olivia paid $90 more than Nelly, how much is the cost of the present?

Ans: _____ [4]

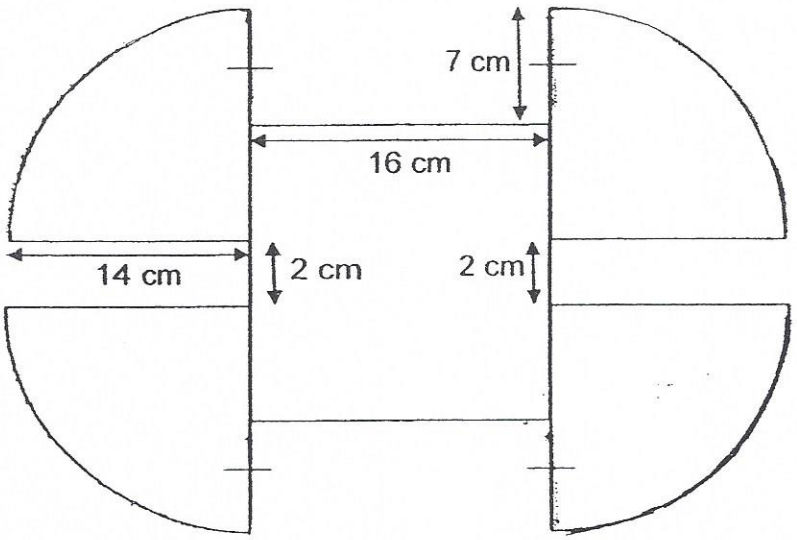
12. The figure below is made up of 4 identical quadrants and a square.

Find:

a) the perimeter of the figure.

b) the area of the figure.

(Take π as $\frac{22}{7}$)



Ans: (a) _____ [3]

(b) _____ [2]

13. There were 330 green and blue marbles in a bag. $\frac{1}{2}$ of the green marbles and $\frac{3}{4}$ of the blue marbles were then taken out by Lisa. In the end, there were 90 green and blue marbles left in the bag. How many of the marbles in the bag were blue at first?

Ans: _____ [4]

14. A tank measuring 80 cm by 50 cm by 60 cm was empty at first.

Water from a tap started to fill the tank at a rate of 1.5 litres per minute.

When the tank was $\frac{5}{8}$ full, a crack appeared at the base of the container.

Water began to leak from the crack at a rate of 500 cm^3 per minute.

What was the total time taken for the whole tank to be completely filled with water?

Ans: _____ [4]

15. At 7.30 a.m., Kimberly left Town P for Town Q driving at a speed of 75 km/h. Half an hour later, Brian also left Town P for Town Q driving at a certain speed. Both of them did not change their speed throughout the journey. At 10.30 a.m., both of them passed a post office that was 150 km away from Town Q. At what time did Brian reach Town Q?

Ans: _____ [4]

16. In Figure 1, Tank A is completely filled with water and Tank B is empty. Water is poured from Tank A into Tank B without spilling.

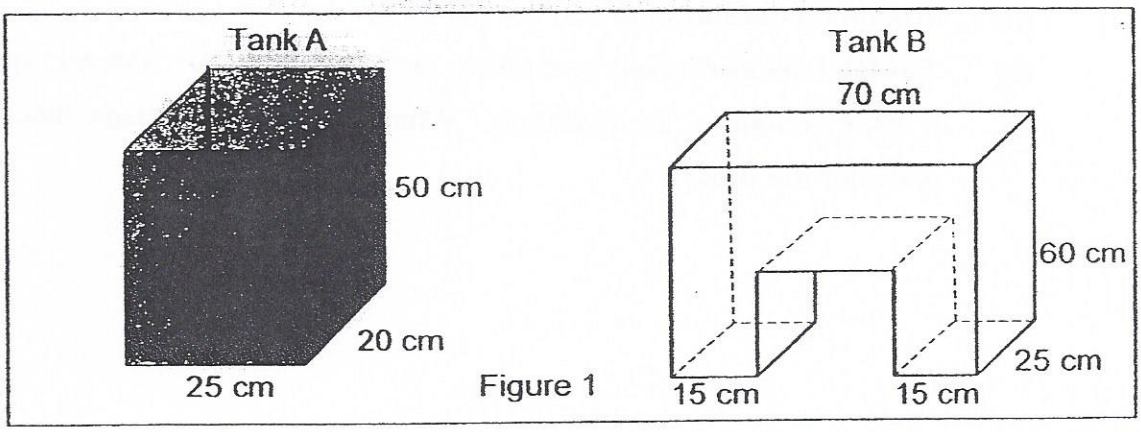


Figure 1

The heights of the water level in the two tanks are now equal as shown in Figure 2.

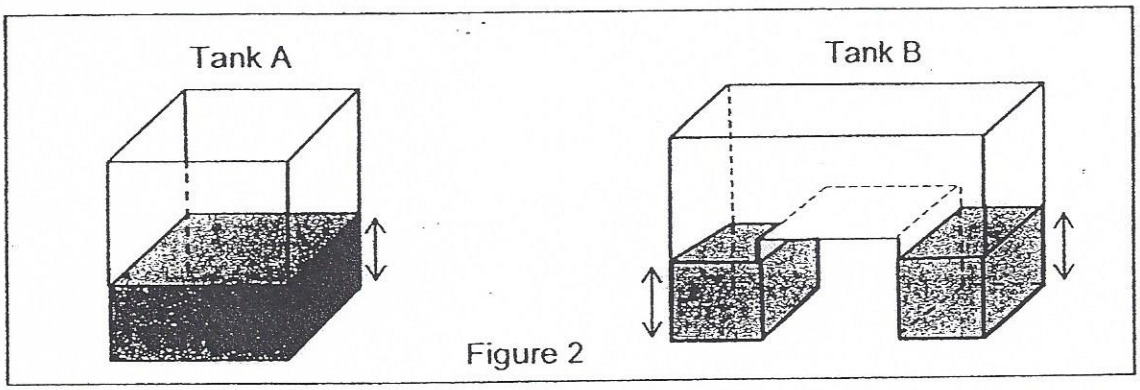


Figure 2

What is the height of the water level in Tank A in Figure 2?

Ans: _____ [5]

17. Kelly spent a total of $384.30 on a dress and a handbag during a sale. She spent $166.70 more on the handbag than on the dress.

(a) How much did she spend on the handbag?

(b) The total discount given for the two items was $33.70 She was given a 5% discount for the handbag. What was the percentage discount given for the dress?

Ans: (a) _____ [2]

(b) _____ [3]

18. Dave had some 50¢ coins. Wayne had some $1 coins. Dave gave 50% of his coins to Wayne and Wayne gave 50% of his coins to Dave. Wayne used some of the 50¢ coins to buy a book that cost $5. Dave used some of his $1 coins to buy a bag that cost $16. After that the ratio of the number of 50¢ coins to $1 coin Dave had was 1 : 2 and the number of 50¢ coins to the number of $1 coins Wayne had was 1 : 5.

How much did Dave have at first?

Ans: _____ [4]

EXAM PAPER 2015
LEVEL : PRIMARY 6
SCHOOL : RAFFLES GIRLS PRIMARY SCHOOL
SUBJECT : MATHS
TERM : PRELIMINARY EXAMINATION

PAPER ONE

Q 1	Q 2	Q 3	Q 4	Q 5	Q 6	Q 7	Q 8	Q9	Q 10
3	3	3	4	2	2	4	2	1	2
Q 11	Q 12	Q 13	Q 14	Q 15					
3	1	3	3	3					

Q16. 83 264, 84 326,86 342, 86 342
Q17. 3 → $\frac{3}{4} \times \frac{1}{2} = \frac{3}{8}$ Q18. 18 → 0.2 x 9 = 1.8 , 1.8 x 10 = 18
Q19. 1 kg 400g Q20. 729cm³ Q21. 750 → 2500 – 1750 = 750
Q22. 500% → $\frac{200}{40} X\ 100 = 500$ Q23. $8\frac{1}{4}$ Q24. 106°→ (360-148)÷2 =106°
Q25. 12 : 3: 7 Q26. $117 → 4 TICKETS → 920 x 4) – 3 = 77, 6 tickets → 77 + 20 +20 =117.
Q27. 64cm² IU→ 80 ÷ 20 = 4, 4u →4x4 = 16, area→16 x 4 = 64
Q28. $(4k +6) → 1st hr → 2K, 2nd +3rd h →k+3+k+3 =2k +6, total → 4k +6
Q29. $2320 → 4% of spending → 320 – 240 =80, 100% of spending →80 x 25 = 2000, 2000+320=2320
Q30. 35 → 22 -12 = 10, 10 x 42 =420, 420÷12=35

PAPER 2

Q1. 84p → $\frac{7}{11}$ X 132p = 84p Q2. 1140 → $\frac{6}{5}$ x 950 = 1140 Q3. SEE PICTURE
Q4. $\frac{5}{7}, \frac{64}{100}, \frac{3}{5}, \frac{11}{20}$ Q5. 191 → 335 ÷ 7 = 47 R6, 47 x 4 = 188, 6 -3 =3, 188 = 3= 191
Q6. $\frac{1}{12}$ → $Total$ → $(12 \div 2)x\ 18 = 108, 9U$ → $(12 \div 2)x\ 9 = 54, Red$ → $54 - 45 = 9, \frac{9}{108} = \frac{1}{12}$
Q7a. $4(\frac{484-3m}{4})$ → $484 - (3\ X\ 16) = 436$, $Q7b.$ $157 →$ $436 \div 4 = 109, 109 + (3\ x\ 16) = 157$
Q8a. 67° → 180 – 65 – 48 = 67 ° Q8b. 132° → $\angle KFE = 180 - 48 = 132°$
Q9. 120 → $\frac{3}{5}\ of\ A = \frac{3}{5}\ of\ B$, $Total$ → 540 $(9U), 1U$ →$540 \div 9 = 60, 2U$ →$60\ X\ 2 = 120$
Q10. 75 → Assume all are $10, 10 x 95 =950, 2 x 175 =350, 950- 350 = 600, 600 ÷(10-2) = 75
Q11. $1800 → O→32U-15U=17U, DIFF →17U -15U =2U($90), IU →90 ÷2 = 45, 40U→45X40=1800
Q12a. 208cm → Perimeter → 7 x 4 = 28, (14 X 2) + 16 +16+2=2=92, $\frac{22}{7}$ x 28 =88, total →28 +92+88=208
Q12b. 872cm² → CIRCLE →$\frac{22}{7}\ x\ 14\ x\ 14 = 616, SQUARE$ → $16\ X\ 16 = 256, TOTAL$ →$616 + 256 = 872$
Q13. 300 →left →$\frac{1}{2}G + \frac{1}{4}\ B = 90, taken\ out$ →$\frac{1}{2}G + \frac{3}{4}B = 330 - 90 = 240, \frac{2}{4}B$ →$240 - 90 = 150$
$\frac{4}{4}\ B$ →$150\ x\ 2 = 300.$
Q14. 3h 10 min →$\frac{5}{8}\ x\ 80\ x\ 50\ x\ 60 = 150\ 000, 150\ 000cm = 150litre, 150 \div 1.5 = 100(\text{min}),$
$1.5 - 0.5 = 1\ litre, \frac{3}{8}\ x\ 80\ x\ 50\ x\ 60$ =9000, 90000cm³ = 90 litre.
Q15. 12.10pm → DI →3 x75 =225 (km) , total distance →225 +150 =375 (km),
S2 → $225 \div 2\frac{1}{2} = 90\frac{km}{h}, 375 \div 90 = 4\ \frac{1}{6}$ (h), $4\frac{1}{6}$h after 8am →12.10pm
Q16. 20cm → 25 x 20 x50=25.000. Total base area →925 x 20) + (30 x 25) = 1250
Height →25,000÷1250 = 20.
Q17a. $275.50 → Handbag →(384.3 + 166.7) ÷2 = 275.5.
Q17b. 15% → Dress →384.3 – 275.5 =108.8, 275.5 =108.8, 275.5÷95 x 5 =14.5, 33.7 – 14.5, 33.7 -14.5
=19.2, 19.2 +108.8=128, $\frac{19.2}{128}$ x 100 =15
Q18. $22 → 1U =1P +10, 5P =2U +16,5P =2P+20+16,3P=20+16=36, 1P=36÷3=12, (12+10) X 2 =44,
44 X 0.5 = 22.

THE END