First Semestral Assessment 2016
Primary 6 Mathematics

Date: 10th May 2016

Questions **1** to **10** carry 1 mark each. Questions **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 the oval (1, 2, 3 or 4) on the Optical Answer Sheet.

All diagrams in this paper are not drawn to scale.

(20 marks)

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1. 2 million, 7 ten thousands and 3 tens has the same value as _____.

   (1) 207 030
   (2) 270 003
   (3) 2 070 003
   (4) 2 070 030

2. Which of the following fractions is less than $\frac{1}{2}$?

   (1) $\frac{4}{7}$
   (2) $\frac{5}{9}$
   (3) $\frac{5}{12}$
   (4) $\frac{6}{11}$

3. Express the sum of $\frac{3}{10}$ and $\frac{5}{1000}$ as a decimal.

   (1) 0.035
   (2) 0.305
   (3) 0.350
   (4) 3.005

(Go on to the next page)

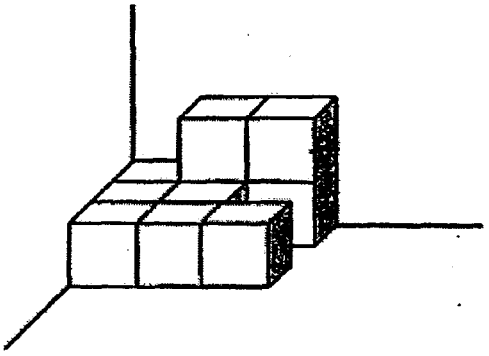
4. What is the maximum number of books Megan can purchase with $89?

Storybooks on Sale!

3 books for $20
OR
1 book for $8.50

(1) 5
(2) 13
(3) 30
(4) 4

5. The figure below is made up of identical 1-cm cubes. What is the minimum number of cubes to be added to form a bigger cube?



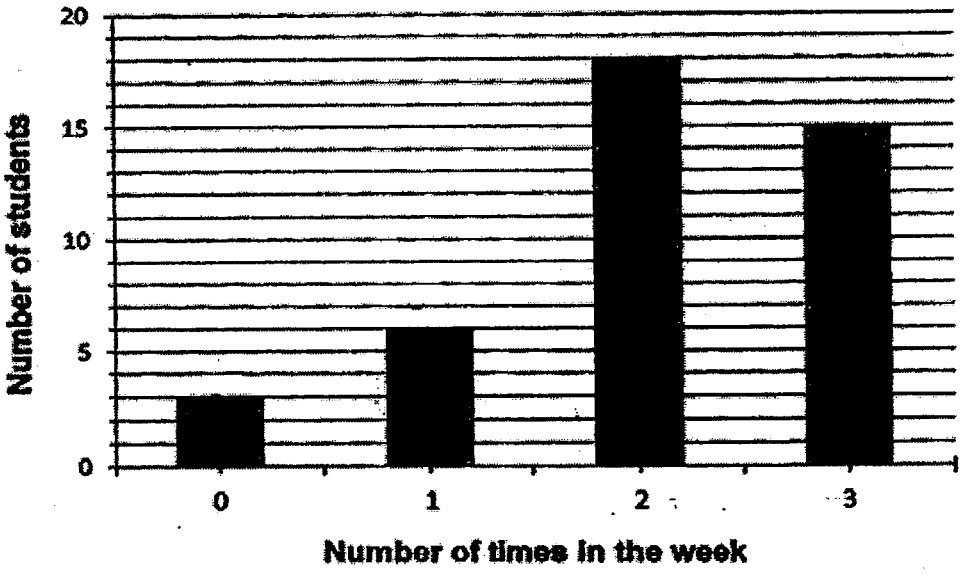
(1) 17
(2) 18
(3) 27
(4) 54

(Go on to the next page)

6. A movie started at 22.00. It ended $2\frac{1}{4}$ hours later. What time did the movie end?

(1) 12.15 a.m.
(2) 12.15 p.m.
(3) 12.25 a.m.
(4) 12.25 p.m.

7. The bar graph below shows the number of students in Primary 6A who played at the school field last week.



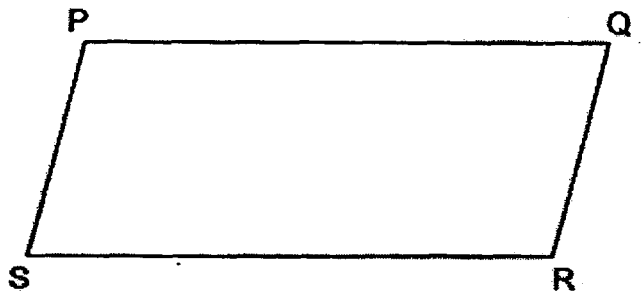
How many pupils played at the school field at least twice last week?

(1) 18
(2) 27
(3) 33
(4) 42

(Go on to the next page

8. The figure is not drawn to scale. PQRS is a parallelogram.

Which of the following statements is true?



(1) $\angle RSP + \angle PQR = 180°$

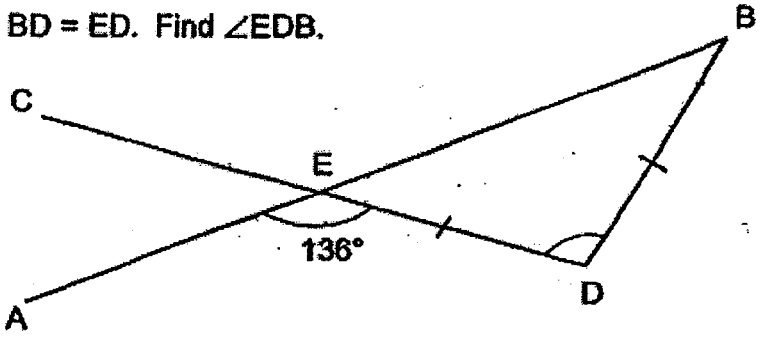
(2) $\angle SPQ + \angle RSP = 180°$

(3) $\angle RSP = \angle SPQ$

(4) $\angle SPQ = \angle PQR$

9. The figure below is not drawn to scale. AEB and CED are straight lines.

BD = ED. Find $\angle EDB$.



(1) 22°

(2) 44°

(3) 92°

(4) 136°

(Go on to the next page)

10. A rectangular field had a length of $6t$ metres and a breadth of 30 metres. Sandra ran round the field once. Express the total distance Sandra ran in terms of t.

(1) $(6t + 30)$ m

(2) $(6t + 60)$ m

(3) $(12t + 30)$ m

(4) $(12t + 60)$ m

11. Justin took several days to read a new novel. On the first day, he read 6 pages. Each day, he read 3 more pages than the day before. On the last day, he read 18 pages. How many days did he take to read the novel?

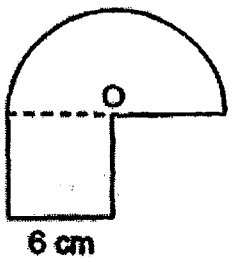
(1) 5

(2) 6

(3) 3

(4) 4

12. The figure below is not drawn to scale. It is made up of a semicircle with centre O and a square with side 6 cm. What is the perimeter of the whole figure? (Take $\pi = 3.14$)



(1) 27.42 cm

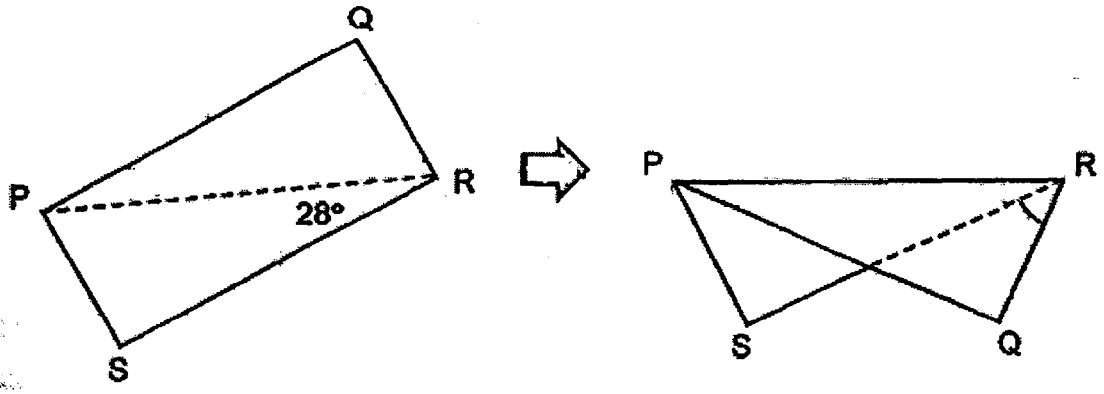
(2) 33.42 cm

(3) 36.84 cm

(4) 42.84 cm

(Go on to the next page)

13. A rectangle PQRS is folded along its diagonal PR as shown.
Given that $\angle PRS = 28°$, find $\angle QRS$.



(1) 17°

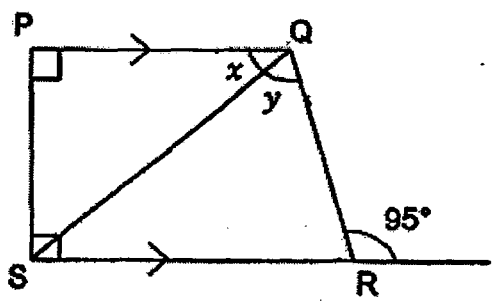
(2) 31°

(3) 34°

(4) 62°

14. The figure below is not drawn to scale. PQRS is a trapezium.

$\angle x$ is $\frac{2}{3}$ of $\angle y$. Find $\angle x$.



(1) 38°

(2) 45°

(3) 57°

(4) 85°

(Go on to the next page)

15. Wei Ling baked some cookies. She kept $\frac{7}{10}$ of the cookies for herself and gave the rest to Ben and Ravi in the ratio 5 : 1. Ben received 20 more cookies than Ravi. How many cookies did Wei Ling keep for herself?

(1) 28

(2) 35

(3) 56

(4) 70

(Go on to Booklet B)

First Semestral Assessment 2016
Primary 6 Mathematics

Date: 10th May 2016

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. (10 marks)

Do not write in this space

All diagrams in this paper are not drawn to scale unless stated otherwise.

16. Find the product of 72.03 and 6.

Ans: _____

17. What is the sum of all the factors of 18?

Ans: _____

18. How many millilitres are there in 30.08 litres?

Ans: _____ ml

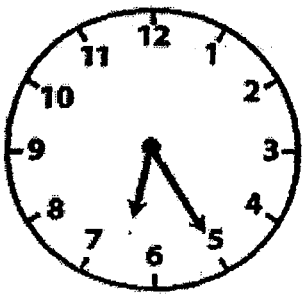
(Go on to the next page)

19. 30% of a number is 420. What is the number?

Do not write in this space

Ans: _____

20. The clock shows the time on Kevin's watch at the end of his 2-hour swimming lesson. His watch is 15 min faster than the actual time. What time did his swimming lesson start?



Ans: _____ p.m.

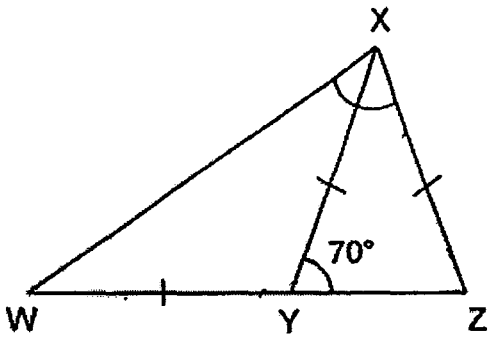
21. Tiffany scored an average of 64 marks in her first 2 tests. How many marks must she score in her third test to get an average of 70 marks for the 3 tests?

Ans: _____

(Go on to the next page)

22. The figure below is not drawn to scale. XYZ is an isosceles triangle. XY = WY. Find ∠WXZ.

Do not write in this space

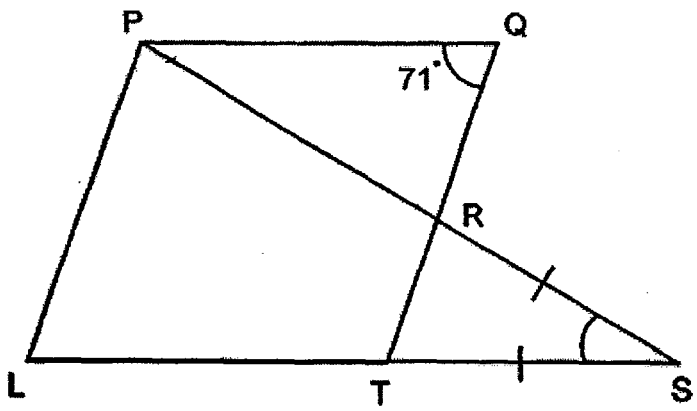


Ans: _____°

23. What is the perimeter of a semicircle with radius 14 cm? (Take π as $\frac{22}{7}$)

Ans: _____cm

24. The figure below is not drawn to scale. PQTL is a rhombus and PRS and LTS are straight lines. Find ∠ RST.



Ans: _____°

(Go on to the next page)

25. At a sale, the price of a printer decreased by 15% to $170. What is the original price of the printer?

Do not write in this space

Ans: $ _____

Questions **26** to **30** carry 2 marks each. Show your workings clearly in the space provided for each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)

All diagrams in this paper are not drawn to scale unless stated otherwise.

26. Iris has some sweets. When she packs them into bags of 3 or 8, there will be no remaining sweets. When the sweets are packed into bags of 5, she will be short of 2 sweets. What is the smallest possible number of sweets she has?

Ans: _____

(Go on to the next page)

27. The figure below is not drawn to scale. ABCD is a square. CB = BE, CEF is a right-angled triangle and DBE is a straight line. Find ∠ECF.

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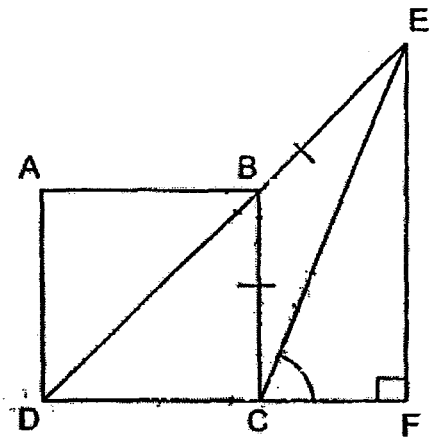
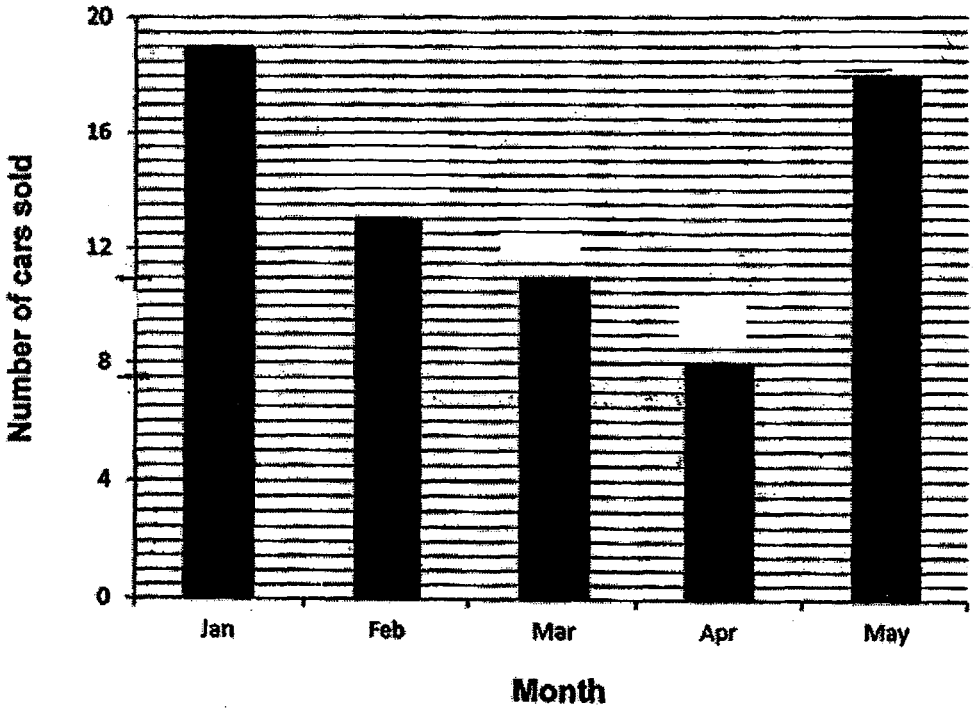
in this spa



Ans: _____ °

28. The bar graph below shows the number of cars sold over 5 months. What is the ratio of number of cars sold in February to the total number of cars sold in the five months? Give your answer in simplest form.

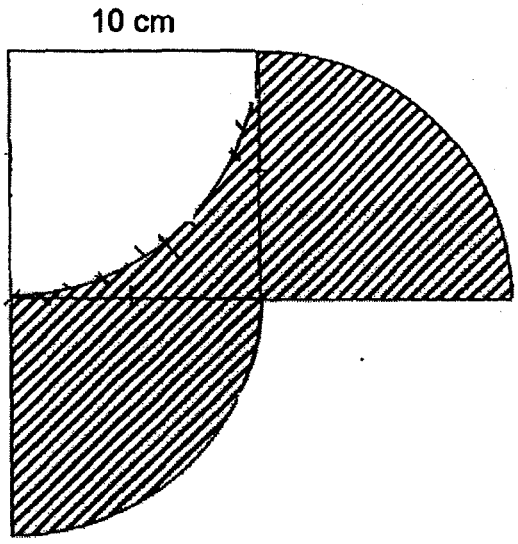


Ans: _____

(Go on to the next page)

29. The figure below is made up of a square and 2 quarter-circles. What is the perimeter of the shaded part? Leave your answer in terms of π.

Do not write in this space



Ans: _____ cm

30. Zali is w years old 5 years ago. His sister is 2 years younger than him. What will be their combined age 10 years from now?

Ans : _____

End of paper. Have you checked your work?

Rosyth School
First Semestral Assessment 2016
Primary 6 Mathematics

Name: _____ Register No. _____

Class: Pr 6 - _____

Date: 10th May 2016 Parent's Signature: _____

Time: 1 h 40 minutes

PAPER 2

Instructions to Pupils:

1. Do not open this booklet until you are told to do so.
2. Follow all instructions carefully.
3. **Show your workings clearly** as marks are awarded for correct working.
4. Write your answers in this booklet.
5. You are allowed to use a calculator
6. Answer all questions.

Questions	Maximum Mark	Marks Obtained
Q 1 to 5	10	
Q 6 to 18	50	

Section	Maximum Mark	Marks Obtained
Paper 1	40	
Paper 2	60	
Total	100	

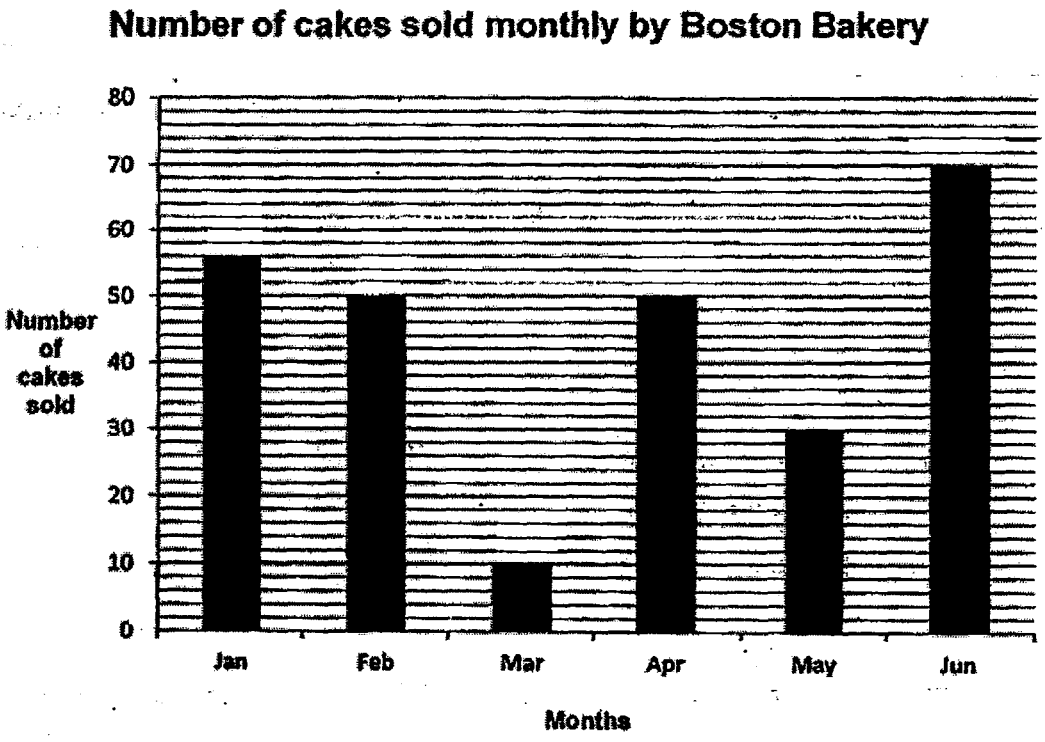
* This booklet consists of 16 printed pages (including this cover page)

This paper is not to be reproduced in part or whole without the permission of the Principal.

Questions 1 to 5 carry 2 marks each. Show your working clearly in the space provided for each question and 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 unless stated otherwise. (10 marks)

Do not write in this space

1. The bar graph below shows the number of cakes sold monthly from January to June by Boston Bakery.



What was the average number of cakes sold from February to May?

Ans: _____ [2m]

(Go on to the next page)

2. Melvin had to answer 15 questions in an English test. He took half an hour for the first 10 questions. Melvin started the test at 10.45 a.m. and completed the test at 12.30 p.m. How long did he take to complete the last 5 questions?

Do not write in this space

Ans: _____ [2m]

3. Carolyn wanted to buy an iPad that costs $556.40 including 7% GST. During a sale, she did not need to pay GST and was given an additional discount of $88. How much did Carolyn have to pay in the end?

Ans: $_____ [2m]

(Go on to the next page)

4. The ratio of the perimeter of Rectangle X to the perimeter of Square Y is 6 : 1. The perimeter of Rectangle X is 168 cm. What is the area of Square Y?

Do not write in this space

Ans: _____ cm^2 [2m]

5. 4 years ago, Susan was thrice as old as Uman. If Uman is 19 years old now, how old is Susan now?

Ans: _____ [2m]

(Go on to the next page)

Questions 6 to 18, show your working clearly in the space provided for each question 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. Ahmad spent $\frac{1}{3}$ of his salary on food and gave $\frac{3}{8}$ of the remainder to his mother. He saved the remaining $3622. How much money did he spend on food?

Ans: _____ [3m]

7. Tom and Jenny had $357 altogether. Tom gave $\frac{2}{5}$ of his money to his father and Jenny spent 75% of her money. They found that they had an equal amount of money left. How much did Jenny spend?

Ans: _____ [3m]

(Go on to the next page)

8. Jimmy filled $\frac{5}{9}$ of a rectangular tank measuring 30 cm by 66 cm by 35 cm with fruit juice. All of the fruit juice from the tank was poured into some rectangular containers measuring 5 cm by 2 cm by 15 cm to the brim. What is the height of the fruit juice in the last container?

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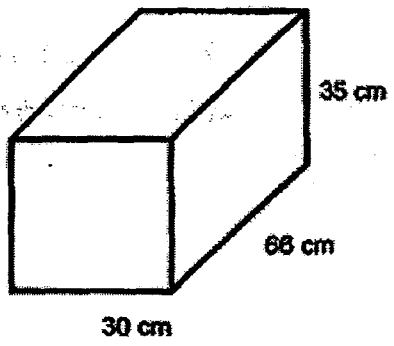
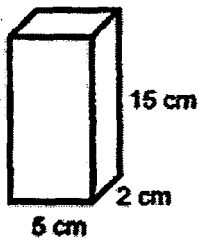


Tank



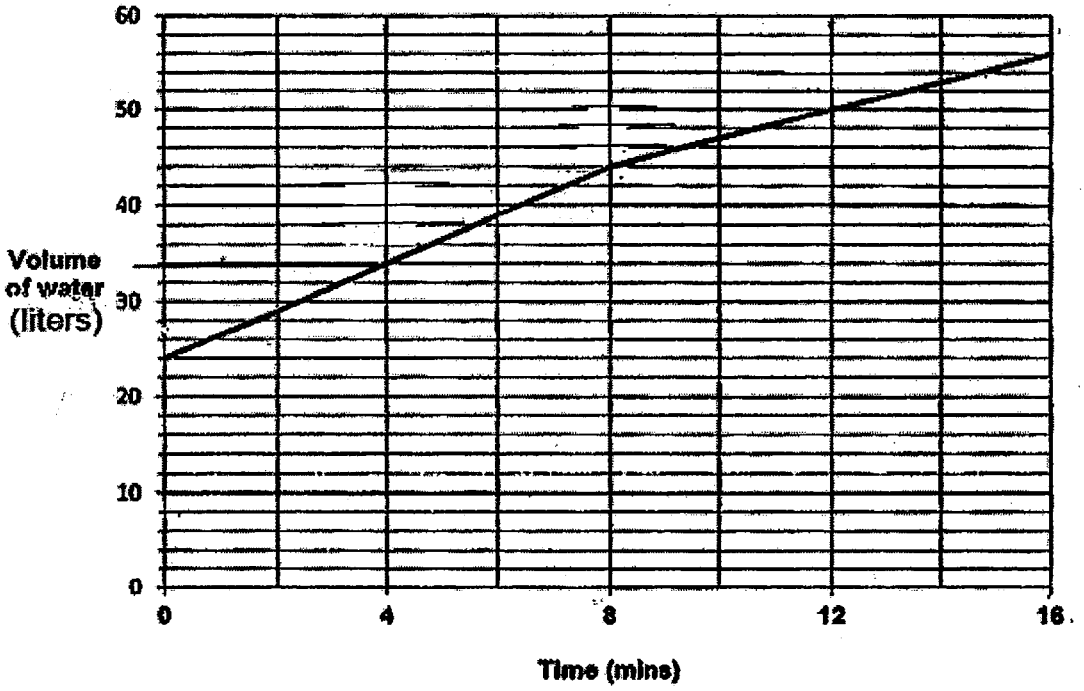
Container

Ans: _____ [3m]

(Go on to the next page)

9. The tank contained some water at first. Tap A was turned on to fill the tank with water at a constant rate. After 8 minutes, Tap B tap was turned on to drain water out of the tank at a constant rate.

The graph below shows the volume of water in the tank during the 16 minute period.



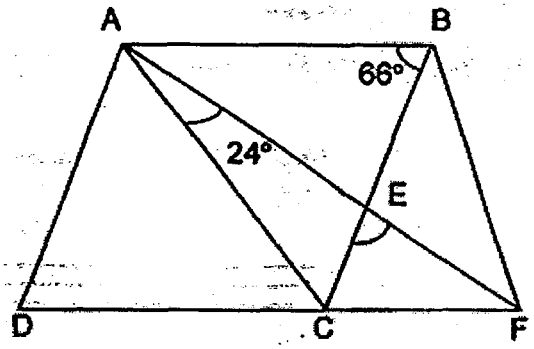
How many litres of water did Tap B drain every minute?

Do not write in this space

Ans: _____ [3m]

(Go on to the next page)

10. ABCD is a rhombus. AEF and DCF are straight lines. $\angle ABC = 66°$ and $\angle EAC = 24°$. Find $\angle CEF$.



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in this spac

Ans: _____ [3m]

(Go on to the next page)

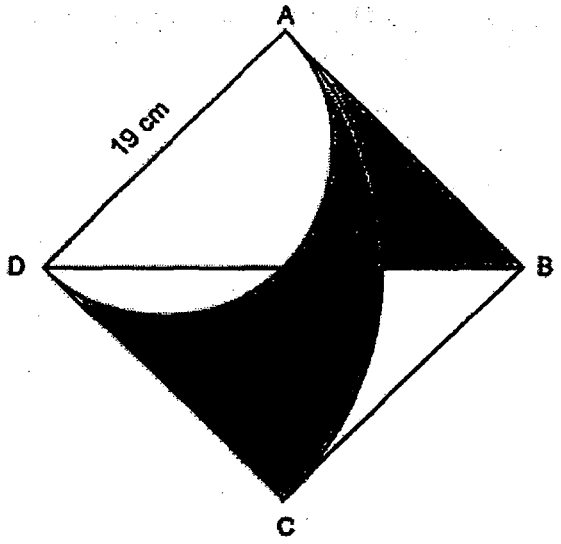
11. If Jacobs gave Min Hui 70 stamps, he would have the same number of stamps as Min Hui. If Min Hui gave Jacobs 28 stamps, the ratio of the number of stamps she had to the number of stamps that Jacobs had would be 1 : 8. How many stamps did Min Hui have?

Do not write in this space

Ans: _____ [3m]

(Go on to the next page)

12. ABCD is a square of side 19 cm. A quadrant and a semicircle are drawn inside the square. Find the area of the shaded part using calculator π. Give your answer to the nearest 2 decimal places.



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in this spa

Ans: _____ [4m]

(Go on to the next page)

13. At an electronics sale, the usual price of a camera is 25% that of a notebook before including a GST of 7%. Michael bought a camera and a notebook for a total of $2675 after including GST.

a) What is the cost of the notebook with GST?
b) What is the total GST paid on the 2 items?

Do not write in this space

Ans: a) _____ [2m]

Ans: b) _____ [2m]

(Go on to the next page)

14. James and Susan had 289 stamps altogether. Susan had 33 fewer stamps than James. James sold twice as many stamps as Susan and had the same number of stamps that Susan had left.

Do not write in this space

a) How many stamps had Susan left?
b) How many stamps did James have at first?

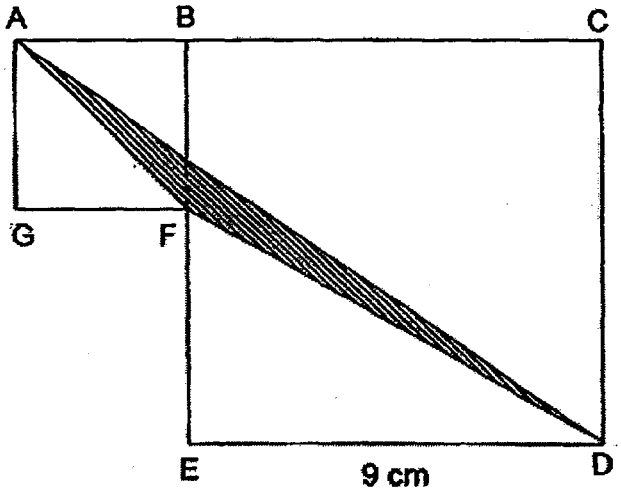
Ans: a) _____ [3m]

Ans: b) _____ [2m]

(Go on to the next page)

15. The figure below is made up of two squares, ABFG, BCDE and a triangle ADF. The ratio of the length of AB to the length of BC is 1 : 3. DE = 9 cm. Find the shaded area.

Do not write in this space



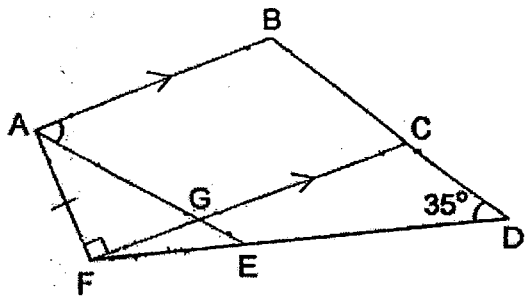
Ans: _____ [5m]

(Go on to the next page)

16. ABCG is a trapezium and EF = AF. AFG is a right-angled triangle. BCD, DEF and CGF are straight lines. The ratio of ∠AFE to ∠BAG is 2 : 1 and ∠ABC is thrice as much as ∠BAG.

Do not write in this space

a) Find ∠BAG.
b) Find ∠EFG.



Ans: a) _____ [2m]

Ans: b) _____ [2m]

(Go on to the next page)

17. The ratio of the number of chocolates to the number of sweets that John bought was 2 : 7. The cost of a chocolate was $1.70 more than the cost of a sweet. He paid $299.60 for the chocolates and sweets. If the total cost of the sweets was $92.40 more than the total cost of chocolates, how many chocolates and sweets did John buy altogether?

Do not wri
in this spac

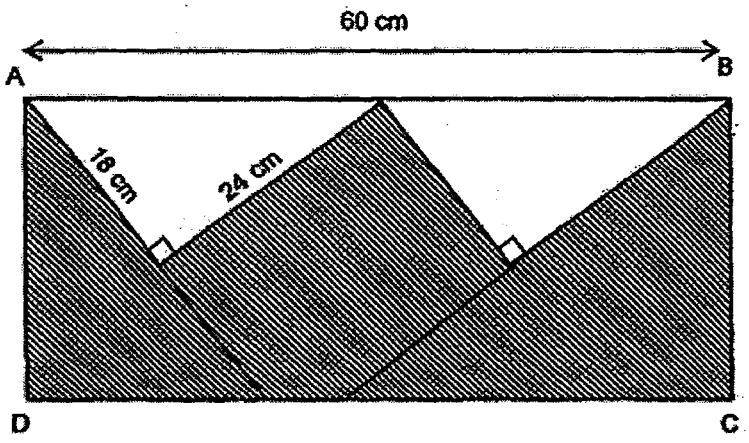
Ans: _____ [5m]

(Go on to the next page)

18. In the figure below, ABCD is a rectangle. ABCD contains 2 identical right-angled triangles. The perimeter of the shaded part is 210 cm.

What is the ratio of the area of the 2 triangles to the area of the shaded part? Give your answer in the simplest form.

Do not write in this space



Ans: _____ [5m]

End of paper

ANSWER SHEET

EXAM PAPER 2016

SCHOOL :ROSYTH

SUBJECT :P6 MATHEMATICS

TERM : SA1

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

16)432.18 17)39 18)30080ml 19)1400

20)4.10p.m. 21)82 22)75° 23)72cm 24)38°

25)$200 26)48 27)67.5° 28)13.69

29)(15π+20)cm 30)(2w+28)

<u>Paper 2</u>

1)Total→50 + 10 + 50 + 30 = 140

Average→140 ÷ 4 = 35

2)45 + 30 = 75

75 mins→1hr 15 min

3)107% →556.40

1% →556.40÷107 = 5.20

5.20 x 100 = 520

520 – 88 = $432

4)168÷6 = 28

28 = 7 + 7 + 7 + 7

7 x 7 = 49cm2

5)19 – 4 = 15 (Uman 4 years ago)

15 x 3 + 4 = 49

6)10u →3622

1 u →3622÷10 = 362.20

362.20 x 8 = 2897.60

7)Tom : 5X

Jerry : 12X

17X = $357

9X = $357/7 x 9 = $189

8)256 x 150 = 38400

38500 – 38400 = 100

100÷(2 x 6) = 10 cm

9)44L – 32L = 10L

10L – 6L = 4L

4L÷4 = 1L

10) $\angle ECD = 180^\circ - 66^\circ = 114^\circ$

$\angle ECA = (180^\circ - 66^\circ) \div 2 = 57^\circ$

$\angle CEA = 180^\circ - 57^\circ - 24^\circ = 99^\circ$

$\angle CEF = 180^\circ - 99^\circ = 81^\circ$

11) 7u → 28 + 70 + 70 + 28 = 196

1u → 196 ÷ 7 = 28

MH → 28 + 28 = 56stamps

12) 19cm x 19cm = $361cm_2$

19cm ÷ 2 = 9.5cm

9.5cm x 9.5cm = $90.25cm_2$

$90.25cm_2 \div 2 = 45.125cm_2$

$361cm_2 \div 4 = 90.25cm_2$

Shaded Area → $[(361cm_2 - 90.25\pi cm_2)] \div 2 +$

$(90.25\pi - 45.125\pi)cm_2 = 180.50cm_2$

13) a) Camera + Notebook → 100/107 x \$2675 = \$2500

Notebook → (\$2500 ÷ 5) x 4 = \$2000

107/100 x \$2000 = \$2140

b) 7/100 x \$2500 = \$175

14) a) 33 x 2 = 66

(289 – 33) ÷ 2 = 128

128 – 33 = 96

b) (298 + 33) ÷ 2 = 161

15)Area of△AGF →½ x 3cm x 3cm = 4.5cm$_2$

Area of△ADC →½ x 12cm x 9cm = 54cm$_2$

Area of△FED →½ x 9cm 6cm = 27cm$_2$

(9cm x 9cm) + (3cm x 3cm) = 90cm$_2$

90cm$_2$ – 4.5cm$_2$ – 54cm$_2$ – 27cm$_2$ = 4.5cm$_2$

16)a)∠ABC + ∠AFE = 360° – 35° – 90° = 235°

∠BAG = 235° ÷ 5 = 47°

b)∠AFE = 47° x 2 = 94°

∠EFG = 94° – 90° = 4°

17)$299.60 – $92.40 = $207.20

$207.20 ÷ 2 = $103.60

$103.60 ÷ 2 = $51.80

$51.80 – $28 = $23.80

14 x 9 = 126

210 – 144 = 66

18)210cm – [(18cm + 24cm) x 2] – 60cm = 66cm

66cm ÷ 2 = 33cm

66cm x 33cm = 1980cm$_2$

18cm x 24cm = 432cm$_2$

1980cm$_2$ – 432cm$_2$ = 1548cm$_2$

Triangles	:	Shaded
432	:	1548
12	:	43

ANS: 12 : 43