Name : _____

Class : Primary 6 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL (PRIMARY)

Primary 6

2015 Preliminary Examination

Mathematics

Paper 1

Booklet A

25 August 2015

Total Time for Booklets A and B: 50 minutes

INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
The use of calculators is **NOT** allowed.

This booklet consists of *8* printed pages including the cover page.

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 correct oval (1, 2, 3, or 4) on the Optical Answer Sheet.

(20 marks)

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1. Which of the following, when rounded off to the nearest thousand is 853 000?

   1) 852 455

   2) 852 555

   3) 853 555

   4) 853 655

2. Express $1\frac{3}{100}$ as a decimal.

   1) 0.013

   2) 0.13

   3) 1.03

   4) 1.003

3. The ratio of Anthony's stickers to Ben's stickers is 4 : 5. The ratio of Anthony's stickers to Charles' stickers is 8 : 7. Find the ratio of Charles' stickers to Ben's stickers to Anthony's stickers.

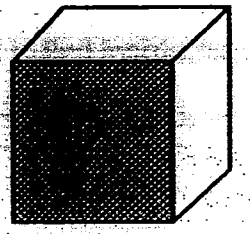
   1) 7 : 5 : 4

   2) 7 : 5 : 8

   3) 7 : 10 : 4

   4) 7 : 10 : 8

4. The volume of the cube shown below is 216 cm^3. Find the area of the shaded face of the cube.



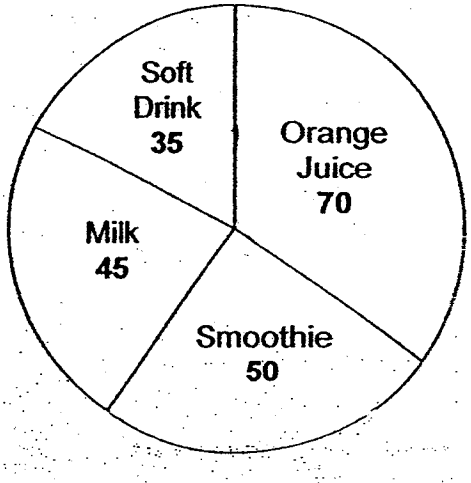
1) 6 cm^2

2) 24 cm^2

3) 36 cm^2

4) 64 cm^2

5. A group of 200 children was asked to choose their favourite drink. The pie chart below shows the number of children who chose each of the different types of drinks. Which drink was chosen by 35% of the children?



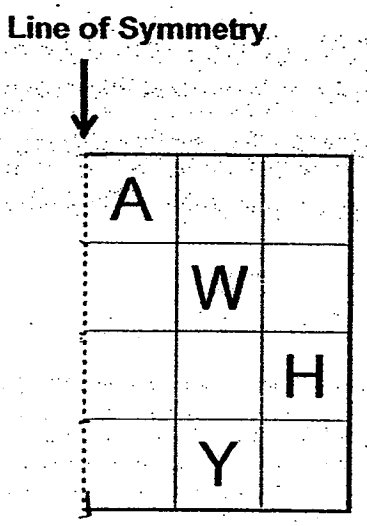
1) Milk

2) Orange Juice

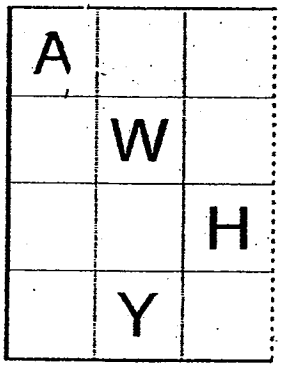
3) Smoothie

4) Soft Drink

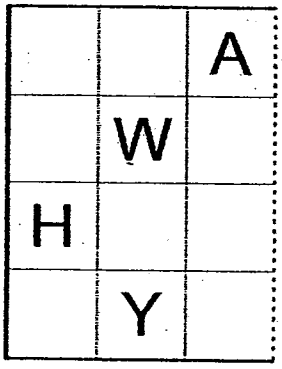
6. Which of the following figures completes the other symmetrical half of the figure below?



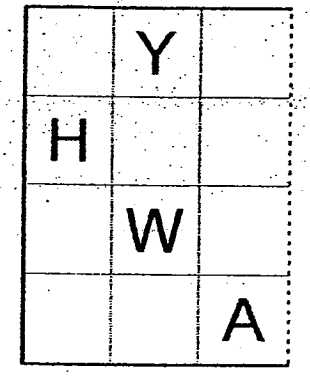
1)



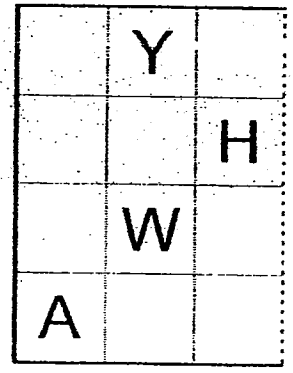
2)



3)



4)



7. Sally, Tania and Uma finished eating one pizza together. Tania ate $\frac{1}{4}$ of the pizza. Sally ate a smaller portion of the pizza than Uma. Which of the following shows the possible fractions of the pizza Sally and Uma had eaten?

	Sally	Uma
1)	$\frac{1}{2}$	$\frac{1}{4}$
2)	$\frac{1}{8}$	$\frac{3}{8}$
3)	$\frac{1}{4}$	$\frac{1}{2}$
4)	$\frac{3}{8}$	$\frac{1}{8}$

8. There are 36 members in a judo class. $\frac{7}{8}$ of the men is equal to $\frac{7}{10}$ of the women. How many more women than men are there in the judo class?

1) 4

2) 6

3) 16

4) 20

9. The mass of Parcel A is 9 kg. The total mass of Parcel B and Parcel C is 24 kg. What is the average mass of the 3 parcels?

1) 11 kg

2) 19 kg

3) 33 kg

4) 57 kg

10. Last year, Mr Lim's monthly salary was $1000. This year, his monthly salary increases by 12%. What is Mr Lim's monthly salary this year?

1) $120

2) $880

3) $1120

4) $1440

11. A wheel of radius 8 cm has turned $2\frac{1}{2}$ revolutions. What is the distance the wheel has travelled in terms of π?

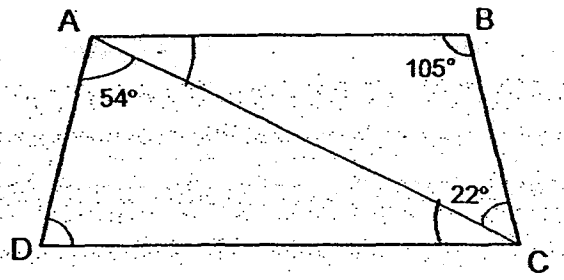
1) 20π cm

2) 40π cm

3) 64π cm

4) 160π cm

12. The figure below is not drawn to scale. ABCD is a trapezium. Find $\angle ADC$.



1) 53°

2) 73°

3) 75°

4) 105°

13. Meredith used 108.06 g of flour to make 6 similar cupcakes. How much flour would she need to make 9 such cupcakes?

1) 18.01 g

2) 54.03 g

3) 162.09 g

4) 972.54 g

14. Lionel is x years old. Jim is 3 times as old as Lionel. Kenny is $\frac{1}{2}$ as old as Jim. Express Kenny's age in terms of x in years.

1) $5x$

2) $6x$

3) $\frac{2x}{3}$

4) $\frac{3x}{2}$

15. Amanda wanted to give \$5 to Bernard so that they would both have the same amount of money. However, Bernard gave \$5 to Amanda instead. Amanda ended up with 6 times as much money as Bernard. How much did Amanda have at first?

1) \$18

2) \$19

3) \$20

4) \$24

** END OF BOOKLET A**

Name : _____

Class : Primary 6 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL (PRIMARY)

Primary 6

2015 Preliminary Examination

Mathematics

Paper 1

Booklet B

25 August 2015

Booklet A	20
Booklet B	20
Total (Paper 1)	40

Total Time for Booklets A and B: 50 minutes

INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
The use of calculators is NOT allowed.

This booklet consists of *8* printed pages including the cover page.

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

16. List all the common factors of 18 and 45.

Ans : _____

17. Find the value of $0.64 \div 20$.
Give your answer as a decimal.

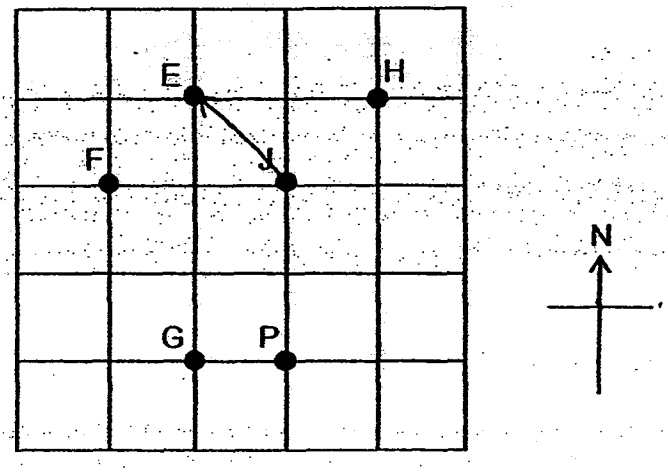
Ans : _____

18. Mr Tan drove from Singapore to Malacca at 21 50. He reached Malacca at 02 00 the next day. How long did he take to reach Malacca?

Ans : _____ h

19. Refer to the square grid below. Which of the points on the square grid is north-west of point J?

Do not write in this space



Ans : _____

20. Express $\frac{35}{400}$ as a percentage.

Ans : _____ %

21. In a stadium, $\frac{4}{11}$ of the spectators are males. What is the ratio of the number of female spectators to the number of male spectators in the stadium?

Ans : _____

22. Simplify $17 + 9a - 8 - 3a$.

Do not write in this spaee

Ans : _____

23. What number must be added to 907 100 to give a million?

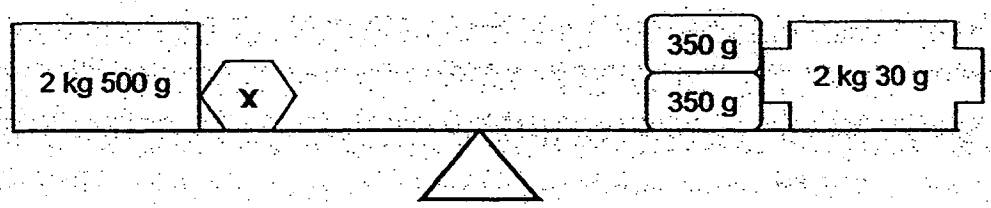
Ans : _____

24. Carol mixed $5\frac{2}{3}\ \ell$ of water with $2\frac{3}{5}\ \ell$ of syrup to make some fruit punch. How much fruit punch did Carol make? Give your answer in the simplest form.

Ans : _____ ℓ

25. The diagram below shows a scale balance.
What is the mass of Object X?

Do not write in this space



Ans : _____ g

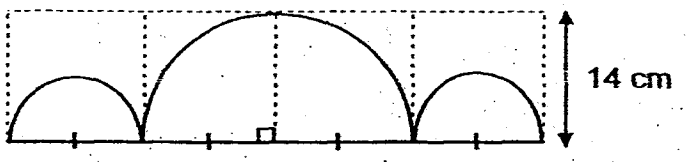
Questions **26** to **30** carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

Do not write in this space

26. Mdm Ng gave some money to her grandchildren. $\frac{1}{4}$ of her money was given to Xavier. $\frac{1}{5}$ of her remaining money was given to Ya Ling. The rest of the money was given to Zoe. What fraction of her money did Mdm Ng give Zoe?

Ans : _____

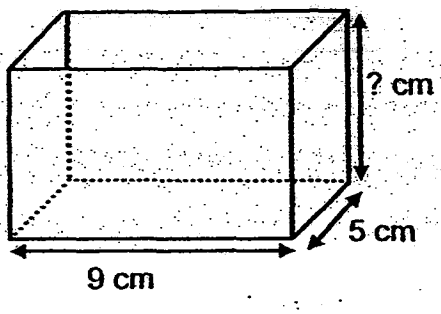
27. The figure below is made up of 3 semi-circles. Find the area of the figure. (Take $\pi = \frac{22}{7}$)



Ans : _____ cm^2

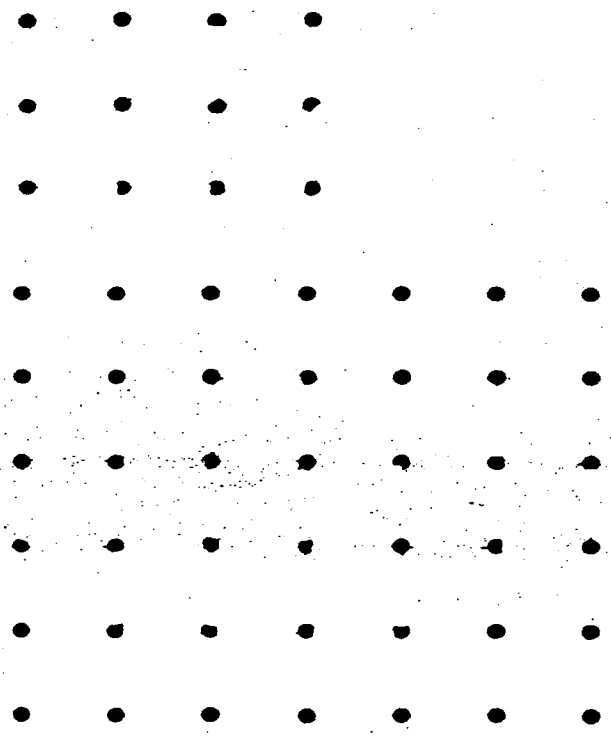
Do not write in this space

28. The container holds 270 cm^3 of water when it is $\frac{1}{3}$ filled. What is the height of the container?



Ans : _____ cm

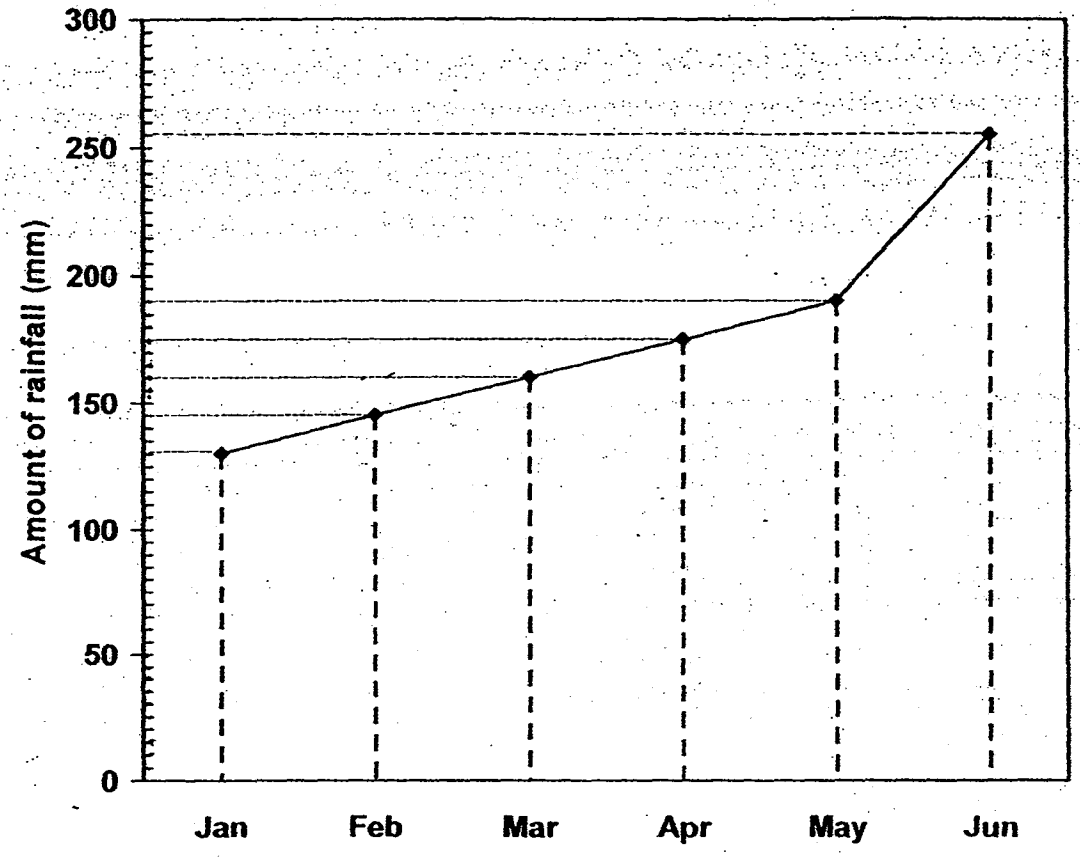
29. This unit shape is used to form a tessellation in the grid below. The boundary of the tessellation has been drawn for you. How many unit shapes were used to form the tessellation below?



Ans : _____

30. The line graph shows the amount of rainfall recorded from January to June.

Do not write in this space



How much more rainfall was collected in May than in February?

Ans : _____ mm

END OF PAPER 1

Name : _____

Class : Primary 6 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL (PRIMARY)

Primary 6

2015 Preliminary Examination

Mathematics

Paper 2

25 August 2015

Paper 1	40
Paper 2	60
Total	100

_____

Parent's / Guardian's Signature

Time: 1 hour 40 minutes

INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so
Follow all instructions carefully.
Answer all questions.
The use of an approved calculator is expected, where appropriate.

This booklet consists of *14* printed pages including the cover page.

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)

Do not write in this space.

1. Sally saves $\$5w$ daily. Her brother saves $\$(3w - 1)$ more than her daily. How much do Sally and her brother save altogether daily? Leave your answer in terms of w.

Ans : \$_____

2. At Good Deal Supermarket, potatoes are sold at 85¢ per 100 g. Viveka paid \$14.45 for some potatoes. Find the mass of potatoes that Viveka bought.

Ans : _____ kg

3. $\frac{7}{8}$ m of ribbon was cut into 2 pieces. The shorter piece was 28 cm. What is the difference between the longer piece of ribbon and the shorter piece of ribbon?

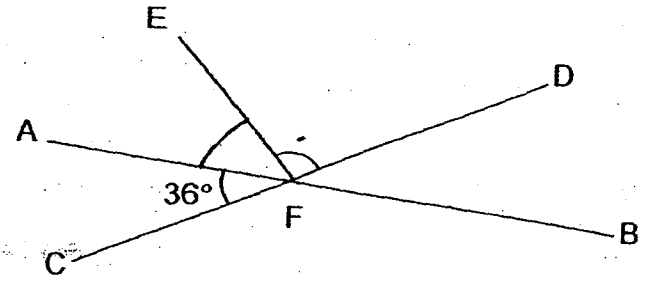
Ans : _____ cm

4. The perimeter of a rectangle is 30 cm. What is the **greatest** possible area of the rectangle?

Do not write in this space.

Ans : _____ cm^2

i. The figure below is not drawn to scale. AB and CD are straight lines. $\angle AFC = 36°$ and $\angle EFD$ is twice of $\angle AFE$. Find $\angle EFD$.



Ans : _____ °

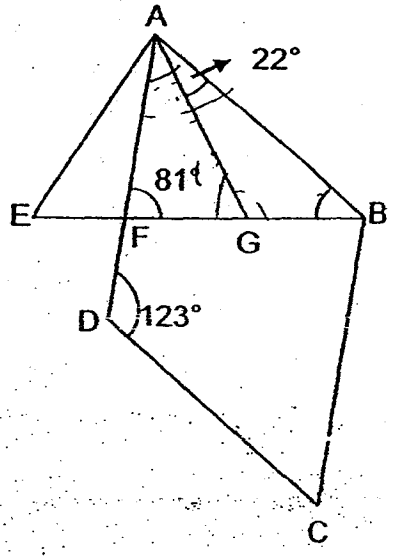
For questions 6 to 18, show your working clearly and write your answers in the spaces provided. The number of marks available is shown in brackets [ ] at the end of each question or part-question. (50 marks)

Do not write in this space.

6. Martin bought 3 identical red shirts and 5 identical blue shirts. The total cost of the shirts was $186. Each blue shirt costs $4.40 more than each red shirt. What is the cost of one red shirt?

Ans: _____ [3]

7. The figure below, not drawn to scale, shows a parallelogram ABCD. $\angle AFG = 81°$, $\angle BAG = 22°$ and $\angle ADC = 123°$. Find $\angle ABG$.



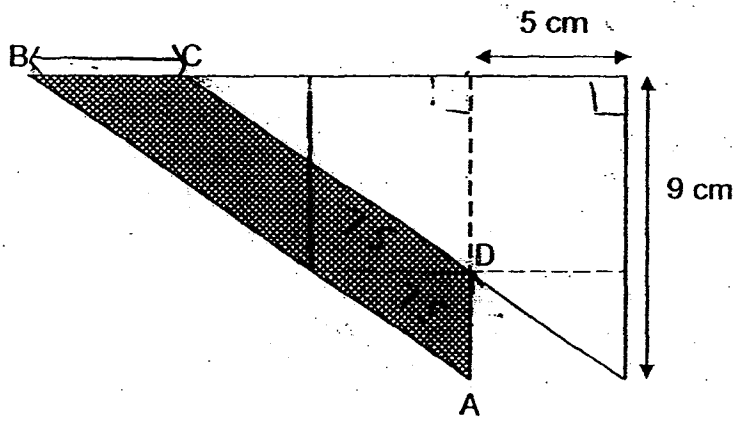
Ans: _____ [3]

8. A laptop cost $3200. Mr Ong bought it at a discount but he had to pay an additional 7% GST on the discounted price. In the end, Mr Ong paid a total of $2396.80 for the laptop. What was the percentage discount Mr Ong received for the laptop?

Do not write in this space.

Ans : _____ [3]

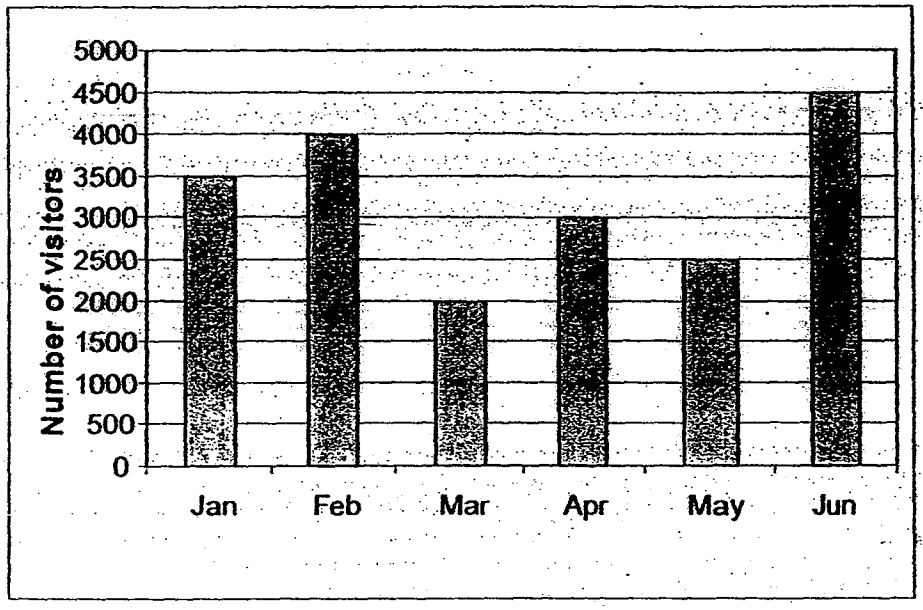
9. The figure below, not drawn to scale, is made up of two identical right-angled triangles overlapping each other. Find the area of the shaded part ABCD, where AD = 3 cm.



Ans : _____ [3]

10. The bar graph below shows the number of visitors who visited a carnival for the first 6 months of the year.

Do not write in this space.



In June, $\frac{1}{6}$ of the visitors were adults, and the number of boys was the same as the number of visitors in March. What fraction of the visitors in June were girls?

Ans : _____ [3]

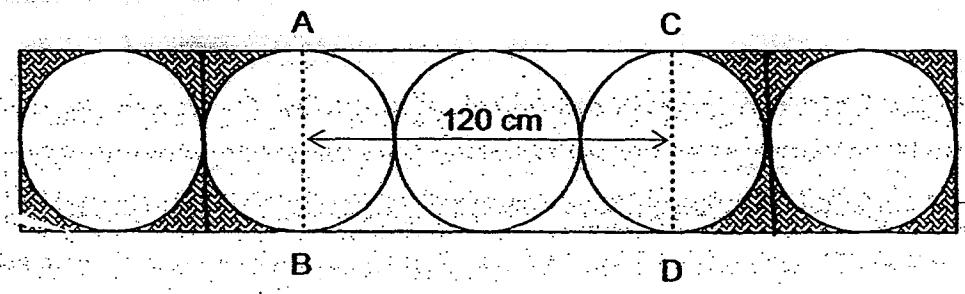
11. A pen costs 95¢ more than a pencil. Catherine bought twice as many pencils as pens. She spent a total of $53.60. She spent $2.40 more on the pens than the pencils. How many pens did Catherine buy?

Do not write in this space.

Ans: _____ [4]

12. Janet cut out circles of the same size and pasted them on a rectangular strip of paper as shown below. AB and CD are diameters of the circles. What is the total area of the shaded parts?
(Take $\pi = 3.14$)

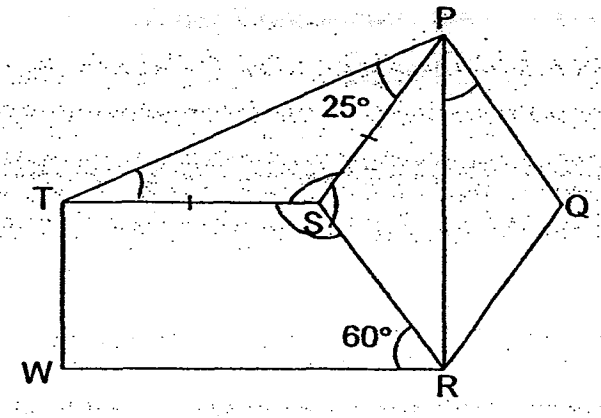
Do not write in this space.



Ans: _____ [4]

13. In the figure below, not drawn to scale, PQRS is a rhombus and RSTW is a trapezium. Find ∠QPR.

Do not write in this space.



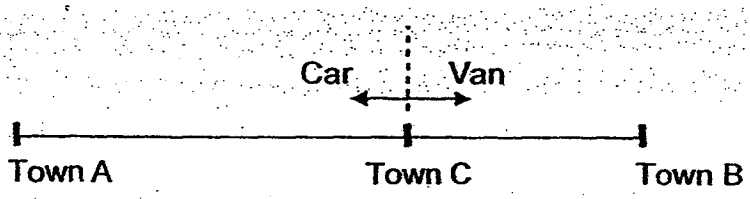
Ans: _____ [4]

14. A car and a van set off from Town C in opposite directions at 11 30. The car travelled towards Town A at an average speed of 80 km/h while the van travelled towards Town B at an average speed of 60 km/h. When the car reached Town A at 14 00, the van was still 15 km away from Town B.

Do not write in this space.

(a) What was the distance between Town A and Town B?

(b) At what time did the van reach Town B?



Ans : (a) _____ [3]

(b) _____ [1]

15. The table below shows the rates of charges for water consumption in a month.

Do not write in this space.

Amount of Water Used	Charges per unit (cents)
First 30 units	137
Subsequent units	160

Rosia used 44 units of water. She paid the cashier a 50-dollar note and some 50-cent and 20-cent coins. The number of 50-cent coins is half the number of 20-cent coins. How many 20-cent coins did the cashier receive from Rosia?

Ans : _____ [4]

16. A fruit stall owner had some pears, apples and oranges. For every 2 pears, there were 3 apples. For every 9 apples, there were 5 oranges.

Do not write in this space.

(a) What is the ratio of the number of pears to the number of apples to the number of oranges the fruit stall owner had?

(b) 36 pears were rotten and thrown away. Then $\frac{1}{5}$ of the remaining fruits were pears. How many fruits did the fruit stall owner have at first?

Ans : (a) _____ [1]

(b) _____ [4]

17. In a warehouse, $\frac{2}{5}$ of the mobile phones are Brand A, $\frac{4}{5}$ of the remainder are Brand B and the rest are Brand C. After shipping out 20% of Brand A mobile phones, 25% of Brand B mobile phones and $\frac{1}{3}$ of Brand C mobile phones, there were 228 mobile phones left.

(a) What fraction of the mobile phones was shipped out? Give your answer in its simplest form.

(b) How many more Brand A mobile phones than Brand C mobile phones were left in the warehouse?

Do not write in this space.

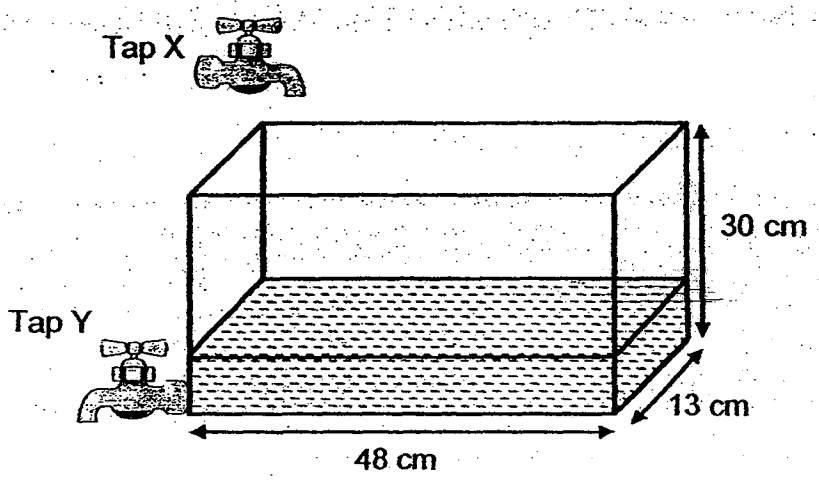
Ans : (a) _____ [2]

(b) _____ [3]

18. A tank measuring 48 cm by 13 cm by 30 cm contained 2.62 ℓ of water.

(a) Tap X was turned on, with water flowing into the tank at 700 mℓ per minute. When the tank was filled with water completely, Tap X was turned off. How long did it take for Tap X to fill up the tank completely?

(b) Then Tap Y was turned on, with water draining out of the tank at 936 mℓ per minute. 15 minutes later, Tap Y was turned off. How much water was left in the tank?



Do not write in this space.

Ans : (a) _____ [3]

(b) _____ [2]

**** END OF PAPER ****

EXAM PAPER 2015
LEVEL : PRIMARY 6
SCHOOL : CHIJ ST NICHOLAS GIRLS' SCHOOL
SUBJECT : MATHS
TERM : PRELIMINARY EXAMINATION

PAPER ONE

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

Q16. 1,3,9 Q17. 0.032 Q18. $4\frac{1}{6}h$ Q19e. Q20. $8\frac{3}{4}\%$ Q21. 7 : 4 Q22. (9+69)

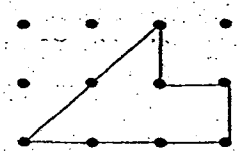
Q23. 92900 Q24. $8\frac{4}{15}$

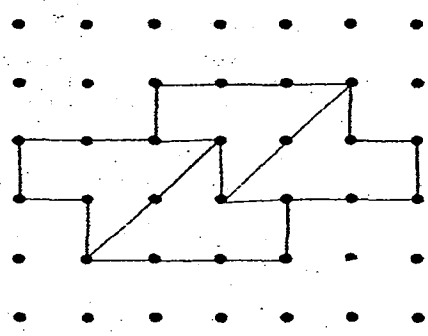
Q25 230g → 2kg30g = 2030g, 2030 +350+350=2730, 2kg 500g = 2500g, 2730-2500=230

Q26. $\frac{3}{5}$ → $1-\frac{1}{4}=\frac{3}{4}, 1-\frac{1}{5}=\frac{4}{5}, \frac{4}{5}x\frac{3}{4}=\frac{3}{5}$

Q27. 462 cm² $14\div2=7, \frac{22}{7}x\,7\,x\,7=154, \frac{22}{7}x\,14\,x\,14\,\div2=44\,x\,14\,\div2=616\,\div2=308, 308+154=462.$

Q28. 18cm → $\frac{270}{9x5}=6, 6\div3=18$ Q29. 4 → SEE PICTURE





Q30. 45mm → 50 ÷10 = 5, 8 x 5 =40, 40 +150=190 (may), 1 x 5 = 5, 150 -5 = 145 (Feb), 190 – 145 = 45

PAPER TWO

Q1. \$13w-1 →5w +3w = 8w – 1 , 8w -1+5 = 13w-1

Q2. $1\frac{7}{20}$kg → 85¢ =\$0.85, \$14.45÷\$0.85 = 17, 17 x 100 =1700, 1700g = $1\frac{7}{10}g$

Q3. 31.5cm → 28CM = 0.28m, $\frac{7}{8}m=0.28m=0.595m, 0.595m-0.28m=0.315m, 0.315m=31.5cm$

Q4. 56cm² Q5. 96° → $\frac{180-36}{1+2}=48, 48\,x\,2=96$ Q6. \$20.50 →4.4 x 5 = 22, $\frac{186-22}{3+5}=20.5$

Q7. 42° →180-123=57, 57-22=35, 180-35-81=64, 180-64=116, 180-116-22=42

Q8. 30% → $\frac{2396.8}{100+7}$, 22.4, 22.4 x 100 = 2240, $\frac{3200-2240}{3200}\,x\,100=30$

Q9. 37.5cm² → $\frac{1}{2}\,X\,5\,X\,3=7.5, 9-3=6, 5\,X\,6=30$

Q10. $\frac{7}{18}$ → $1-\frac{1}{6}-\frac{5}{6}, \frac{5}{6}\,x\,4500=3750, 3750-2000=1750, \frac{1750}{4500}=\frac{7}{18}$

Q11. 16 → Price → pen 9 +95¢ , pencil →a, number → pen – 1u, Pencil – 2U,
Price of all pencils → $\frac{53.6-2.4}{2}=$ 25.6, Price of all pens → 25.6 +2.4 =2.8, 1U(A+95¢) → 28, 2ua →25.6, 2ua + 2u(95¢) →56, 2Ua →56-2u (95¢) , 25.6 →56-2u(95¢0, 2u (95¢) →56 - 25.6 = 30.4,
1U (95¢) → 30.4÷2 = 15.2, 1u →15.2÷0.95 = 16, 16 x 1 = 16

Q12. 2322cm² → 120÷4 = 30, 3.14 x 30 x 30 = 2826, 30 x 2 = 60, 60 x 60 =3600, 3600 – 2826 =774 , 774 ÷4 = 1935, No. of shaded → 12, 12 x 193.5 =2322

Q13. 35° → 180 – 25 – 25 = 130, 180-60=120, 360-130-120=110, 180-110 = 70, 70÷2 = 35.

Q14a. 365km → 2h 30mins = $2\frac{1}{2}h$, $2\frac{1}{2} \times 80 = 200$, $2\frac{1}{2} \times 60 + 15 = 165$, $165 + 200 = 365$

Q15. 30 → 30 x 137 =4110, 44 – 30 = 14, ,14 x 160 =2240, 2240 +4110=6350, 6350¢ = $63.50, $63.50 - $50 =$13.50, 15 x 2 = 30.

Q16a. 6 : 9 : 5 → P : A : O , 2 : 3, 9 : 5 ÷ 6 : 9:5 = 6:9:5

Q16b. 288 → 6u -36 → 1p (x 4), 9u +5u → 4p, 14u → 4p, 24u – 144 → 4p, 24u –144 → 14u, 24u -14u=144, 10u → 1u → 144 ÷10 = 14.4, 6u +9u+5u → 14.4 x)6+9+5)=288

Q17a. $\frac{6}{25}$ *Total* → $\frac{2}{5}$ of mobile phones (A), $\frac{3}{5}$ *of mobile phones* → $\frac{4}{5}$ *of remainder (B)*, $\frac{1}{5}$ *of remainder (C)*, $\frac{20}{100} \times 10 = 2$, $\frac{25}{100} \times 12 = 3$, $\frac{1}{3} \times 3 = 1$, $\frac{2+3+1}{25} = \frac{6}{25}$

Q17b. 72 → 25-6=19, 228 ÷19=12, 10-2=8, 3-1=2, 8-2=6, 6 x 12=72

Q18a. 23 minutes → 2.62l = 2620cm³, $\frac{2620}{48 \times 13} = 4\frac{31}{156}$, $30 - 4\frac{31}{156} = 25\frac{125}{156}$, $25\frac{125}{156} \times 48 \times 13 = 16,100$, 16,100 ÷ 700 = 23.

THE END

Q14b – 1415 hrs.

Q18b – 4680 cm³

– 48 x 13 x 30 = 18720

– 936 x 15 = 14,040

– 18720 – 14040 = 4680
