Name : _____ ( )

Class : Primary 6 _____

Primary 6

2014 Preliminary Examination

Mathematics

Paper 1

Booklet A

19 August 2014

Total Time for Booklets A and B: 50 min

INSTRUCTIONS TO CANIDATES

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)

---

1. In 84 905.621, which digit is in the thousandths place?

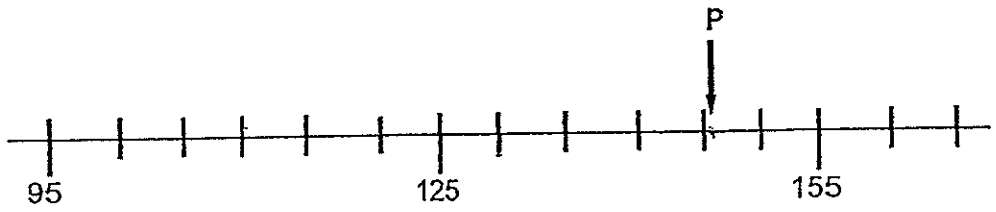
   1) 1

   2) 2

   3) 4

   4) 8

2. In the number line below, what is the best estimate for the value of P?



   1) 140

   2) 146

   3) 149

   4) 150

3. Jim's mass is w kg. His mass is kg less than Howard's. Both of them intend to gain an extra 5 kg each in 3 years' time. What will be their total mass in 3 years' time?

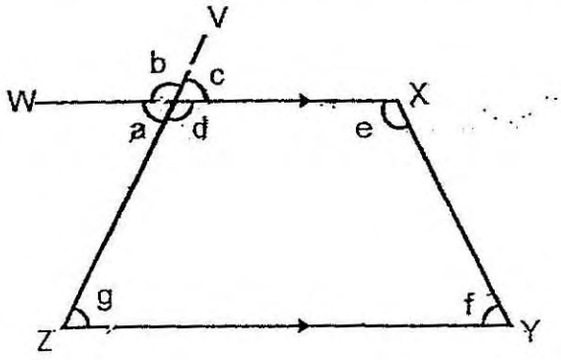
   1) $(2w + 3)$ kg

   2) $(2w + 13)$ kg

   3) $(2w + 33)$ kg

   4) $(6w + 33)$ kg

4. WX and VZ are straight lines.
Which one of the following statements about the figure is **incorrect**?



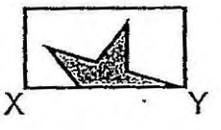
1) $\angle a = \angle c$

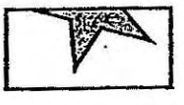
2) $\angle b = \angle d$

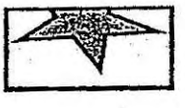
3) $\angle f + \angle g = 180°$

4) $\angle g + \angle d = 180°$

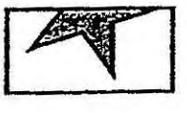
5. James folded a piece of paper into half. XY is the line of symmetry for the star drawn on the piece of paper. Which one of the following figures shows the other half of the paper?



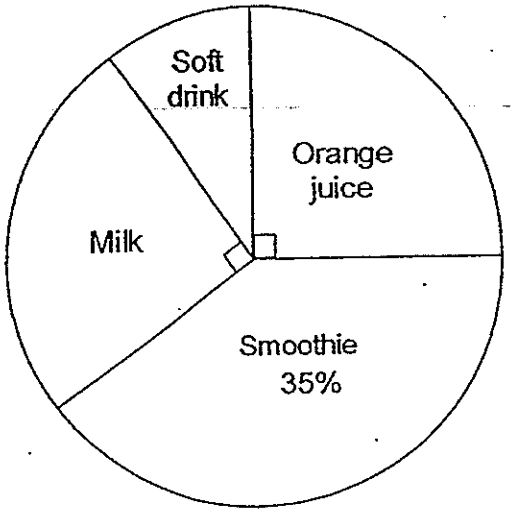
1) 

2) 

3)

4) 

6. The pie chart below shows the different types of drinks 160 pupils like. How many pupils like soft drink?



1) 56

2) 40

3) 30

4) 24

7. The usual price of a kettle is $40. How much will the kettle cost with a discount of 20% ?

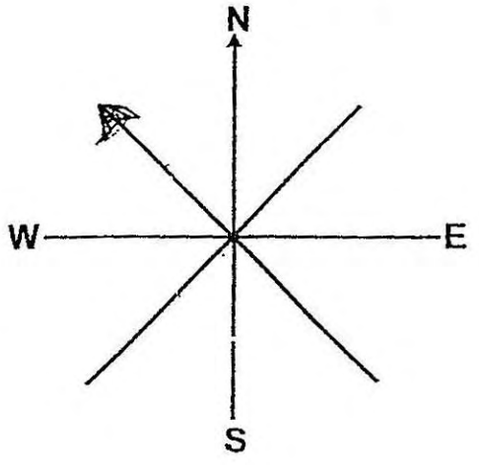
1) $8

2) $20

3) $32

4) $48

8. The figure shows an 8-point compass. Russell was facing North-West at first. He then turned 225° anti-clockwise. Which direction is he facing now?



1) North

2) South

3) East

4) West

9. Jolina has $\frac{6}{7}$ of the nuggets that Karl has. What is the ratio of the total number of nuggets they have to the number of nuggets Karl has?

1) 13 : 7

2) 13 : 6

3) 7 : 6

4) 6 : 7

10. A bus had 46 passengers. 12 passengers alighted from the bus. Express the number of passengers who have alighted as a fraction of the final number of passengers on the bus?

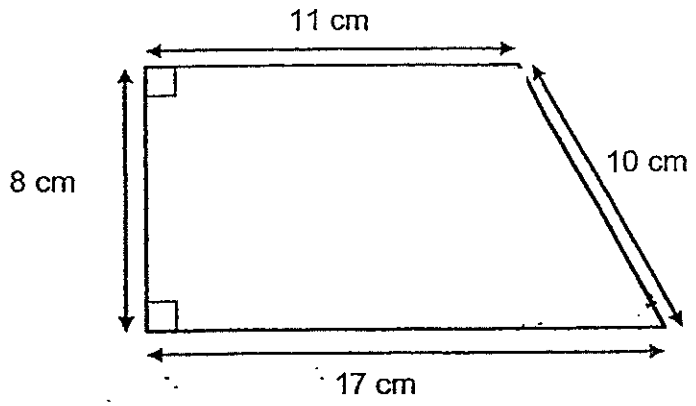
1) $\frac{23}{29}$

2) $\frac{6}{29}$

3) $\frac{6}{23}$

4) $\frac{6}{17}$

11. What is the area of the trapezium below?



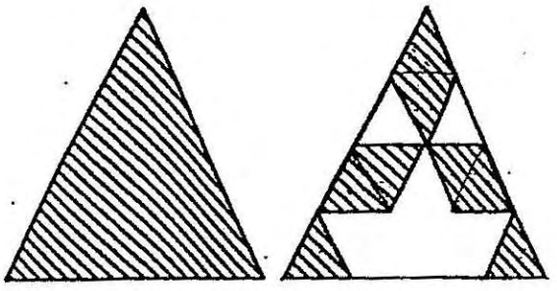
1) 46 cm^2

2) 112 cm^2

3) 118 cm^2

4) 166 cm^2

12. In the figure below, how many more smaller triangles ( ) have to be **unshaded** so that the total shaded area becomes $1\frac{3}{8}$?



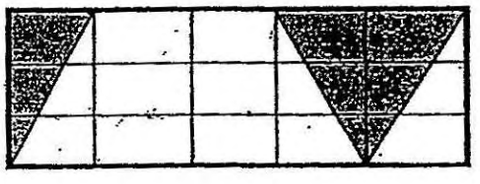
1) 2

2) 3

3) 5

4) 8

13. What percentage of the rectangle shown is shaded?



1) 10%

2) 30%

3) 33%

4) 70%

14. 5 packers can pack 15 boxes in 9 minutes. How many boxes can 1 packer pack in 54 minutes?

1) 3

2) 6

3) 18

4) 27

15. There are nine cards numbered 1 to 9 on the table. Four boys picked 2 cards each at the same time.
The following statements were made by the boys :

Alexi: The product of my numbers is 18.
Blanco: The sum of my numbers is 6.
Christopher: One of my numbers is twice the other.
Danny: The difference between my numbers is 5.

What cards were picked by Christopher?

1) 1 and 2

2) 2 and 4

3) 3 and 6

4) 4 and 8

** END OF BOOKLET A**

Name : _____ ( )

Class: Primary 6 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL (PRIMARY)

Primary 6

2014 Preliminary Examination

Mathematics

Paper 1

Booklet B

19 August 2014

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

Total Time for Booklets A and B : 50 min

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. Ping ate 4 biscuits while Lifang ate m biscuits, What was the average number of biscuits they ate?

Ans : _____

17. Find the valueof $60 \div 12 + (50-7) \times 4$

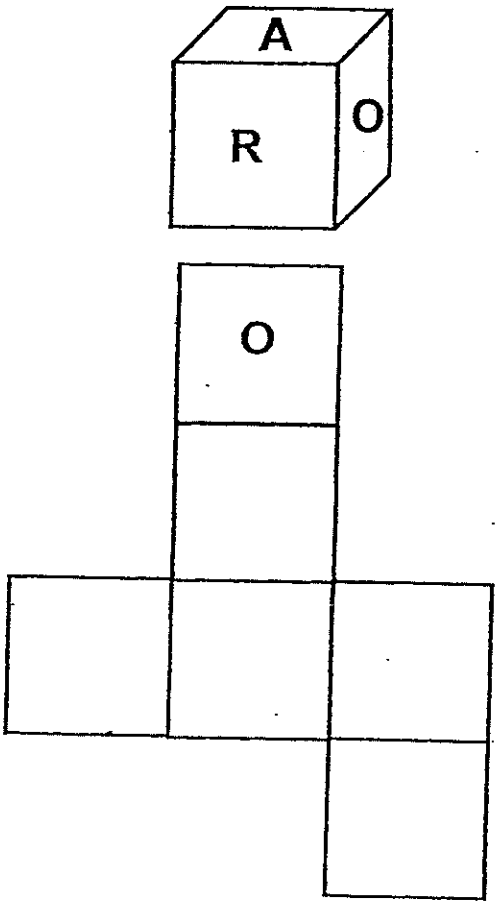
Ans : _____

18. What fraction of 9 m is 50 cm?

Ans : _____

19. Look at the figure and write the letter A and R on the net below.

Do not write in this space



20. 150 dancers were in dance studios X, Y and Z in the ratio 5 : 2 : 3. How many dancers were there in studio Z?

Ans : _____

21. 120 out of 300 participants made it to the "Singapore Got Talents" competition. What percentage of the participants did not make it to the competition?

Do not write in this space

Ans : _____%

22. The mass of a crate of sweet potatoes is 24.06 kg
Find the mass of 70 such crates of sweet potatoes.

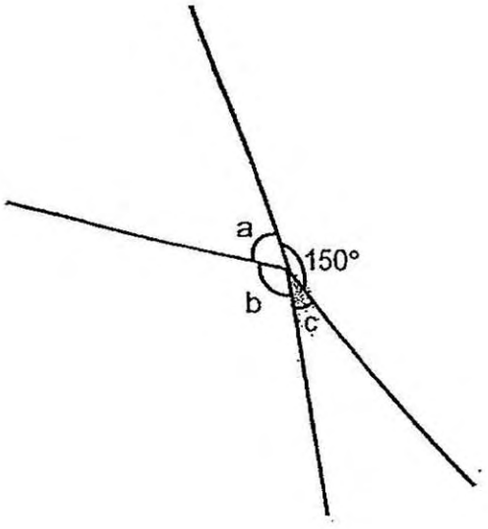
Ans : _____ kg.

23. Laila spent 40% of her money on a skirt which cost $60. How much money did she have at first?

Ans : $_____

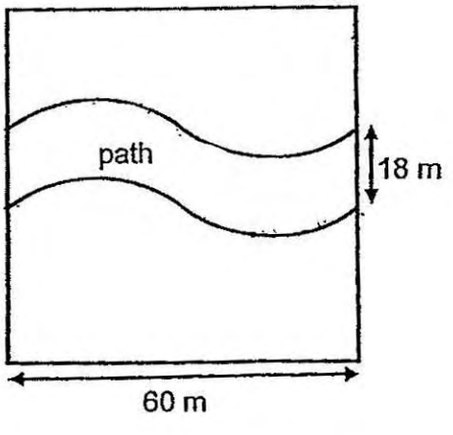
Do not write in this space

24. The figure below is not drawn to scale. The ratio of $\angle a : \angle b : \angle c$ is 2 : 4 : 1
Find $\angle c$.



Ans : _____ °

25. A 60-m square garden has a cement path 18 m wide as shown in the figure, Find the area of the cement path.



Ans : _____ m^2

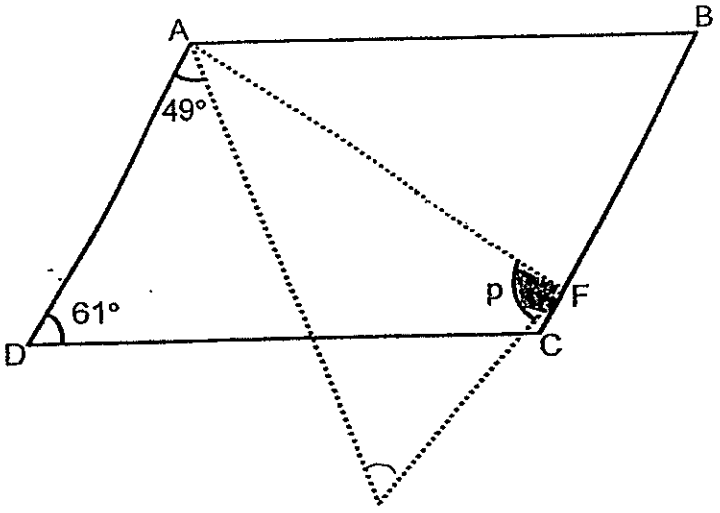
Questions **26** to **30** carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

Do not write in this space

26. Mdm Ong was less than 70 years old in 2013. In 2009, her age was a multiple of 8. In 2007, her age was a multiple of 9. How old was Mdm Ong in 2013?

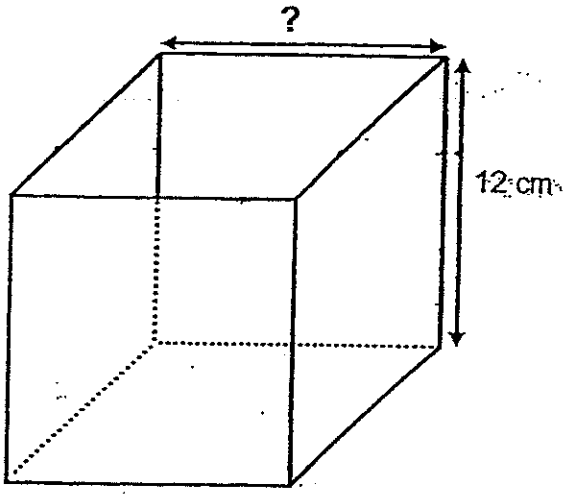
Ans : _____

27. The figure below is not drawn to scale. ABCD is a parallelogram A corner of the parallelogram is folded along AF. Find ∠p



Ans : _____ °

28. A square-based container is completely filled with 768 $m\ell$ of water. Find the unknown side of the container.



Ans : _____ cm

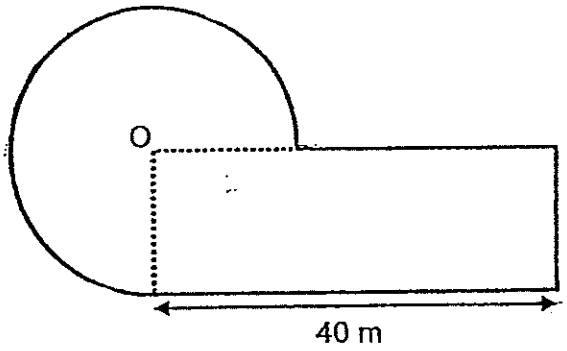
29. Two months ago, Jack jogged at a speed of 4 km/h for 3 hours. Now, he can jog the same distance using only 2 hours. If he jogs for 3 hours now, what is the total distance he can cover?

Ans : _____ km

Do not write in this space

Do not write in this space

30. The figure below is made up of a $\frac{3}{4}$ - circle rectangle. O is the centre of the circle and the diameter of the circle is 28 m. Find the perimeter of the figure. (Take $\pi = \frac{22}{7}$)



Ans : _____ m

Name : _____ ( )

Class : Primary 6 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL (PRIMARY)

Primary 6

2014 Preliminary Examination

Mathematics
Paper 2

19 August 2014

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.

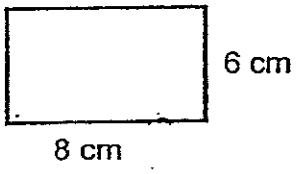
This booklet consists of 16 printed pages including the cover page.

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)

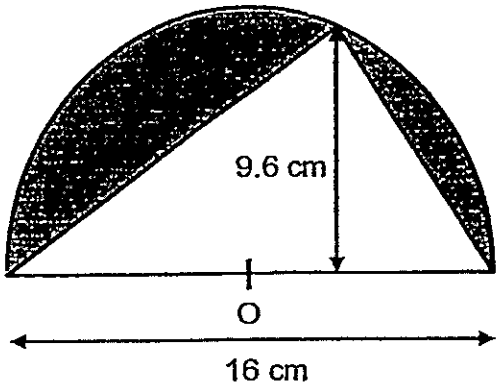
Do not write in this space

1. Tom wants to make a square with rectangular cards each measuring 8 cm by 6 cm How many such rectangular cards must he use to make the smallest possible square?



Ans : _____

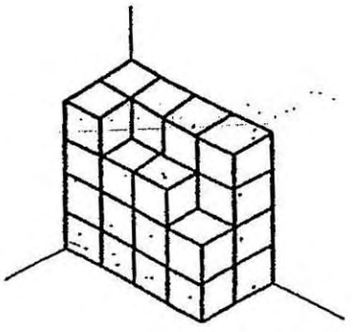
2. The figure below shows a triangle enclosed within a semicircle O is the centre of the semicircle. Find the area of the shaded part. (Take $\pi = 3.14$).



Ans : _____ cm^2

Do not write in this space

3. The figure below is made up of 2-cm cubes. What is the volume of the figure?



Ans: _____ cm^3

4. A bullet train left for Country Zoro at 07 00 The train stopped over at Country Starz for half an hour before continuing its journey to Country Zoro. It reached Country Zoro at 13 45 If the average speed of the train was 350 km/h, what was the total distance covered by the train?

Ans : _____ km

5. Keith and Mike had some chocolates in the ratio 2 : 5 When Mike gave away 40 chocolates to Keith and ate 20 chocolates himself, the ratio of Keith's chocolates to that of Mike's chocolates became 2 : 1 How many chocolates did Mike have at first?

Do not write in this space

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. There are 40 boys and girls in a team. During training, each boy runs a distance of 2 km while each girl runs 0.8 km. Given that all the boys and girls have run a total of 53.6 km how many boys are there in the team?

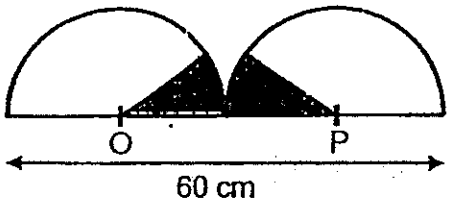
Ans : _____ [3m]

Do not write in this space

7. In a factory, the first batch of toy cars and toy bears were produced in the ratio 5 : 8 In the second batch of production, the number of toy bears produced increased by 40%. If 455 toys.were produced during the first batch, find the increase in the number of toy bears produced in the second batch.

Ans : _____ [3m]

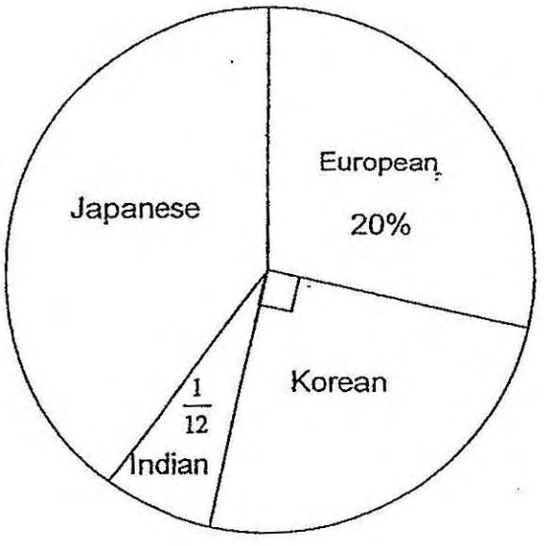
8. The figure shows two identical semicircles. O and P are the centres of the semicircles. $\frac{1}{5}$ of each semicircle is shaded. Find the total area of the shaded parts. (Take $\pi = 3.14$)



Ans _____ [3m]

9. The pie chart shows the different nationalities of tourists at the River Safari on a particular day. If there are 135 Korean tourists, how many European and Indian tourists are there altogether?

Do not write in this space



Ans : _____ [3m]

10. Maxie had 1 900 $m\ell$ more fruit juice than Nick. After Maxie gave Nick 500 $m\ell$ of fruit juice, the ratio of Maxie's juice to Nick's juice became 5 : 2. How much fruit juice did Maxie have at first?

Do not write in this space

Ans : _____ [3m]

11. Shi Mei was selling some bottles of yogurt drinks. $\frac{2}{5}$ of the bottles were of strawberry flavour and the rest were chocolate flavour. After selling $\frac{2}{3}$ of the strawberry flavour yogurt drinks and 312 bottles of chocolate flavour yogurt drinks, she had $\frac{3}{10}$ of the original number of bottles of yogurt drinks left. How many bottles of yogurt drinks were sold altogether?

Do not write in this space

Ans: _____ [4]

12. Tashaki has \$67.50 in the form of 10¢, 20¢ and 50¢ coins. The number of 20-¢ coins is $\frac{1}{4}$ of the number of 50-¢ coins and twice as many as the number of 10-¢ coins. What is the value of the 50-¢ coins that Tashaki has?

Do not write in this space

Ans : _____ [4]

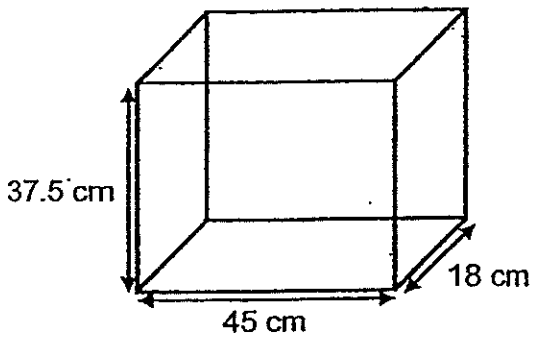
13. After hiking for 30 km, Martin took a break before he continued hiking $\frac{1}{3}$ of the remaining distance He then realised that he still had $\frac{1}{4}$ of the total distance not completed. If Martin's average speed was 6 km/h, how much time did he take to complete the entire hike?

Do not write in this space

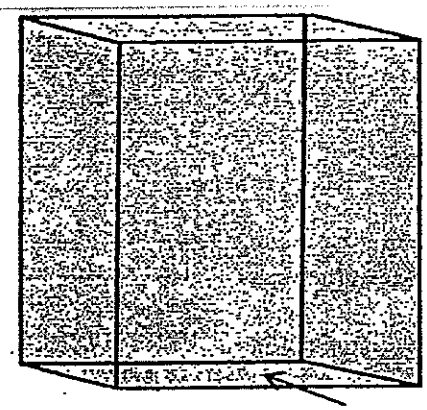
Ans: _____ [4]

14. An empty Container G measures 45 cm by 18 cm by 37.5 cm. Container H with a base area of 1125 cm² was completely filled with water. Ronald poured $\frac{5}{11}$ of the water from container H into container G. The water filled $\frac{2}{3}$ of Container G. What was the height Container H ?

Do not write in this space



Container G



Container H

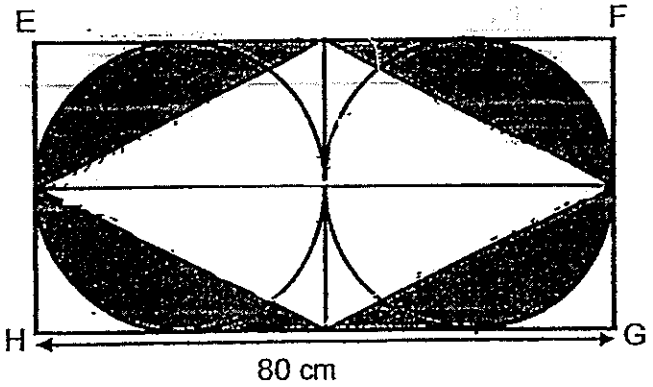
Ans : _____ [4m]

15. In a toy shop, 46% of the toys are stuffed toys. $\frac{5}{9}$ of the remaining toys are toy trains and the rest are toy cars. There are 280 stuffed toys and toy cars. How many toy cars are there in the shop?

Do not write in this space

Ans : _____ [4m]

16. The figure below shows 2 identical circles enclosed in a rectangle EFGH. Find the area of the shaded parts. (Take $\pi = 3.14$)



Do not write in this space

Ans : _____ [5m]

17. Randy and Owen left Town W for Town X at the same time. When Randy reached Town X in 4 hours, Owen had only completed $\frac{3}{8}$ of the distance between the two towns. Owen's speed was 30 km/h slower than Randy. What was Randy's speed?

Do not write in this space

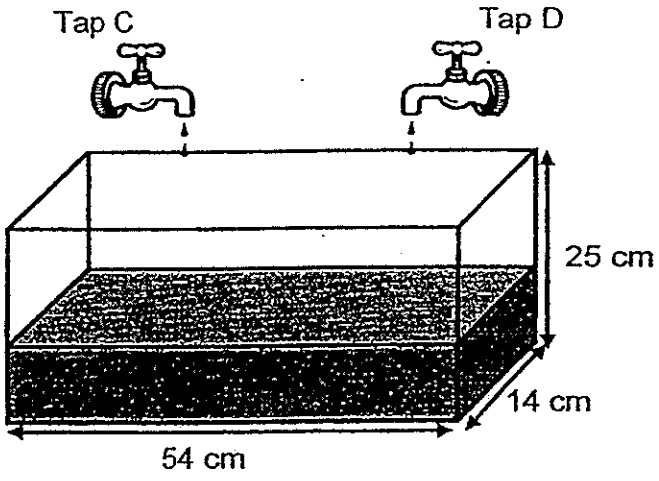
Ans : _____ [5m]

18. Tank K measuring 54 cm by 14 cm by 25 cm contains 4.7 ℓ of water. It is being filled with water flowing from Tap C at 0.9 ℓ /min and Tap D at 995 $m\ell$ /min.

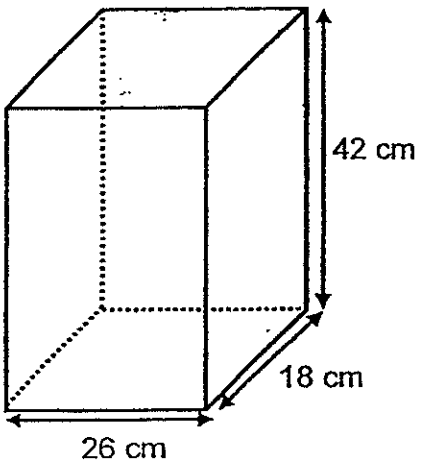
Do not write in this space

(a) Both taps are turned on at the same time. How long does it take to fill up tank K till it is 75% full?

(b) Some water is then poured from tank K to tank J without spilling. The heights of the water level in both the tanks are now equal. Find the height of the water level in tank J. Leave your answer correct to 2 decimal places.



Tank K



Tank J

Ans : (a) _____ [3m]

(b) _____ [2m]

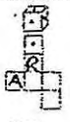
EXAM PAPERS 2014

SCHOOL: CHIJ ST NICHOLAS GIRLS' SCHOOL (PRIMARY)
SUBJECT: MATHEMATICS
LEVEL: PRIMARY 6
TERM: PRELIMINARY EXAM

PAPER 1 BOOKLET A

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

BOOKLET B

Q16 (M+4/2)
Q17 177
Q18 1/18
Q19 
Q20 45
Q21 60
Q22 1684.2
Q23 150
Q24 30
Q25 1080
Q26 60
Q27 84
Q28 8
Q29 18
Q30 146

PAPER 2

Q1 Common multiples of 18
6:6,12,24,30
8:8,16,24,32
24÷8=3
24÷6=4
4x3=12
He must use 12 cards to make the smallest square.

Q2 Triangle → ½x16x9.6= 76.8
16÷2=8
3.14x8x8x½=100.48

100.48-76.8=23.68

The area of the shaded part is 23.68cm².

Q3 4x4x2=32

32-4=28

2x2x2=8

28x8=224

The volume of the figure is 224cm³.

Q4 45.30=15

6h15min=6¼h

6¼x350=2187½=2187.5

The distance covered was 2187.5km.

Q5

Before	After
K : M	K : M
2 : 5	2 : 1
(+40)(-40)	4 : 2
(-20)	

7u- 6u= 1u

1u→20

5u→20x5=100

Mike had 100 chocolates at first.

Q6 2km=2000m

0.8km=800m

53.6km=53600m

40x800=32000

53600-32000=21600

2000-800=1200

21600÷1200=18

There were 18 boys.

Q7 C : B

5 : 8

50: 80

40/100x80=32

50+80=130

1u→455÷130=3.5

32u→3.5x32=112

The increase was 112.

Q8 D→60÷2=30

r→30÷2=15

3.14x15x15=706.5

Total→10u

shaded→2u

706.5÷10=70.65

70.65x2=141.3

The area of the shaded parts is 141.3cm².

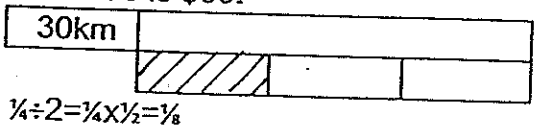
Q9 20%=⅕=12/60
1/12=5/60
¼=15/60
15u→135
1u→135÷15=9
E+I→5u+12u=17u
17u→9x17=153
There were 153 European and Indian tourists altogether.

Q10 500+500=1000
5u-2u=3u
1900-1000=900
900→3u
1u→900÷3=300
5u→300x5=1500
1500+500=2000
Maxie had 2000ml of fruit juice at first.

Q11 Total→ 1-3/10=7/10
⅗x4/10=4/15→sold
7/10-4/15=13/30
312÷13=24
Total→24x30=720
720÷10=72
72x7=504
504 bottles were sold altogether.

Q12 10¢x1=10¢
20¢x2=40¢
50¢x8=$4
1 set→$4+40¢+10¢=$4.50
$67.50÷$4.50=15
15x8=120
120x40.50=$60
It's value is $60.

Q13

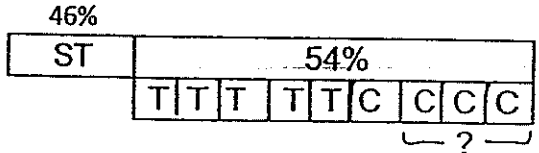


¼÷2=¼x½=⅛
⅛x3=⅜
1-⅜=⅝
5u→30km
1u→30÷5=6
8u→6x8=48(Total Distance)
48÷6=8
He took 8 hours to complete the whole hike.

Q14 ⅗x37.5=25
25x45x18=20250(5u of H)

20250÷5=4050
(H)Total→4050x11=44550
44550÷1125=39.6
Its height is 39.6cm.

Q15



T+C→54%=27/50
1-5/9=4/9
car→4/9x27/50=6/25
ST→46%=23/50
23/50+6/25=7/10
7u→280
1u→280÷7=40
10u(Total)→40x10=400
6/25x400=96
There were 96 toy cars in the shop.

Q16 D→80÷2=40
r→40÷2=20
◯→3.14x20x20=1256
□ →40x80=3200
1256x2=2512
8x →3200-2512=688
Δ →688÷8=86
Δ →½x20x40=800
B→800x2=1600
4A→86x4=344
unshaded : 1600+344=1944
3200-1944=1256
Its area is 1256cm².

Q17 1-⅜=⅝
30x4=120
120→⅝
⅛→120÷5=24
⅜→24x8=192(total distance)
192÷4=48
Randy's speed was 48km/h.

Q18 a) Tank K→54x14x25=18900
18900x75%=14175
14175-4700=9475
900+995=1895
9475÷1895=5
It takes 5 minutes to fill 75%of it.

b) 54x14=756
26x18=468
48+756=1224
14175÷1224≈11.58088
≈11.58
Their height is about 11.58cm.