Name: __ _____ ( )

Class: Primary 6 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL (PRIMARY)

Primary 6 Mathematics

2019 Preliminary Examination

Paper 1

Booklet A

20 August 2019

15 questions
20 marks

Total Time for Booklets A and B: 1 hour

INSTRUCTIONS TO CANDIDATES

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

This booklet consists of 9 printed pages.

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. What is 90 less than 749 900?

(1) 748 810

(2) 749 810

(3) 749 910

(4) 750 800

2. What is the best estimate for 285 x 36?

(1) 200 x 30

(2) 200 x 40

(3) 300 x 30

(4) 300 x 40

3. Mr Jabir collected 30 sacks of rice for charity. He gave 7 sacks of rice to an old folks' home and another $14y$ sacks of rice to a children's home. How many sacks of rice did he have left?

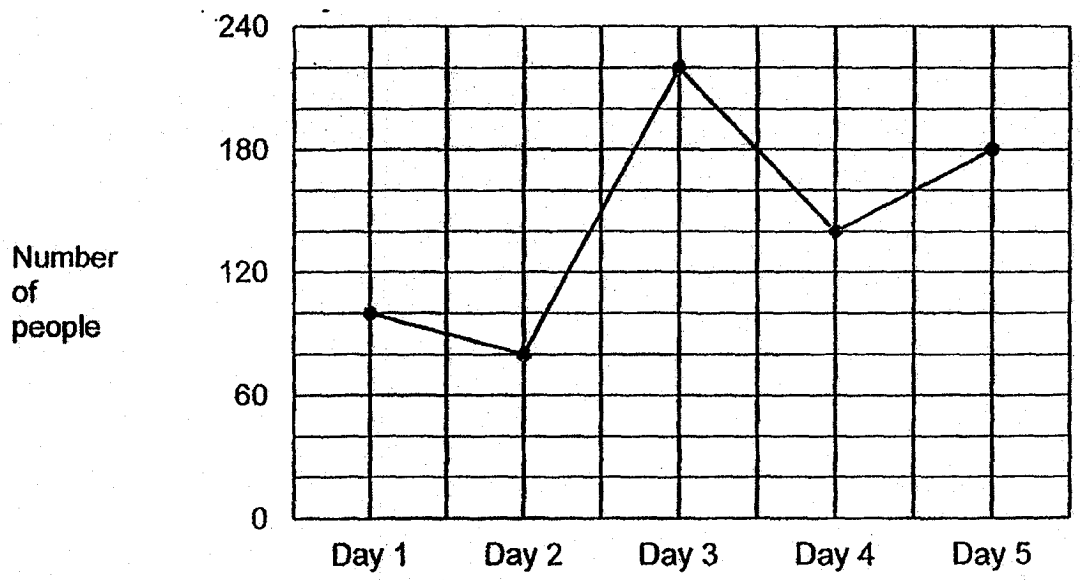
(1) $23 - 14y$

(2) $23 + 14y$

(3) $16y + 7$

(4) $9y$

4. The line graph below shows the number of people attending a drama audition over 5 days.



On which two days was there a difference of 40 people attending the audition?

(1) Day 1 and Day 2

(2) Day 2 and Day 3

(3) Day 3 and Day 4

(4) Day 4 and Day 5

5. In the morning, Mrs Tok sold 40 cakes. In the afternoon, she sold 50 cakes. What was the percentage increase in the number of cakes Mrs Tok sold?

(1) 20%

(2) 25%

(3) 120%

(4) 125%

6. The ratio of the number of boys to the number of girls at a carnival was 5 : 4. Which one of the following is **not** a possible total number of children at the carnival?

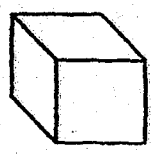
(1) 153

(2) 144

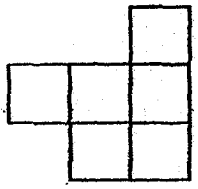
(3) 126

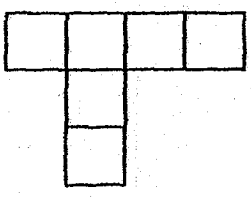
(4) 118

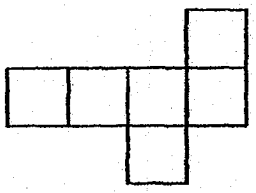
7. The figure below shows a cube.

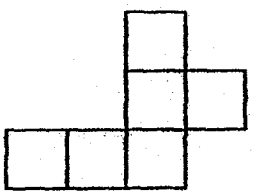


Which one of the following is a net of the cube?

(1) 

(2) 

(3) 

(4) 

8. Arrange the following distances from the longest to the shortest.

5 km 65 m	5 km	5.15 km

	Longest				Shortest
(1)	5.15 km	,	5 km 65 m	,	5 km
(2)	5 km 65 m	,	5 km	,	5.15 km
(3)	5 km	,	5.15 km	,	5 km 65 m
(4)	5 km	,	5 km 65 m	,	5.15 km

9. The table below shows the timings of three boys at a 100-metre race. Before the race, each of them had set a target of 12 seconds. One of the boys' timings is missing.

Name	Timing (s)
Min Shun	11.94
Xanthus	12.10
Wen Yang	?
Vijay	12.05

Min Shun was 0.12 s faster than Wen Yang. Which of the four boys' timing was the closest to the target set?

(1) Wen Yang

(2) Min Shun

(3) Xanthus

(4) Vijay

10. Hafsah walks at an average speed of 60 m/min. At this speed, how long does she take to walk 640 m?

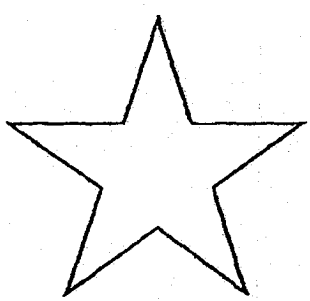
(1) 10 min

(2) $10\frac{2}{5}$ min

(3) $10\frac{2}{3}$ min

(4) 11 min

11. A number of pupils formed a star shape with the same number of pupils on each of the sides. There were 15 pupils on each side of the star. All the sides of the star are equal. How many pupils formed the star shape?



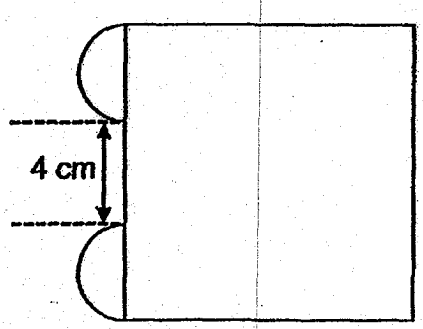
(1) 130

(2) 140

(3) 145

(4) 150

12. The figure below is made up of a square and two identical semicircles. The area of the square is 64 cm². What is the area of the two semicircles? Leave your answer in terms of π.



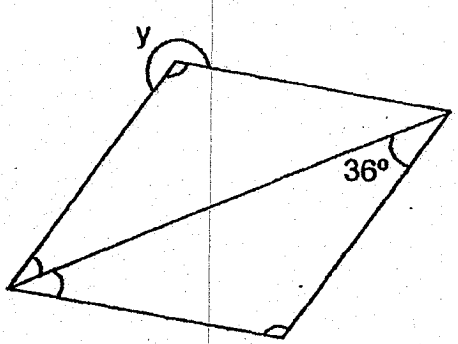
(1) π cm²

(2) 2π cm²

(3) 3π cm²

(4) 4π cm²

13. The figure below shows a rhombus. Find $\angle y$.



(1) 216°

(2) 252°

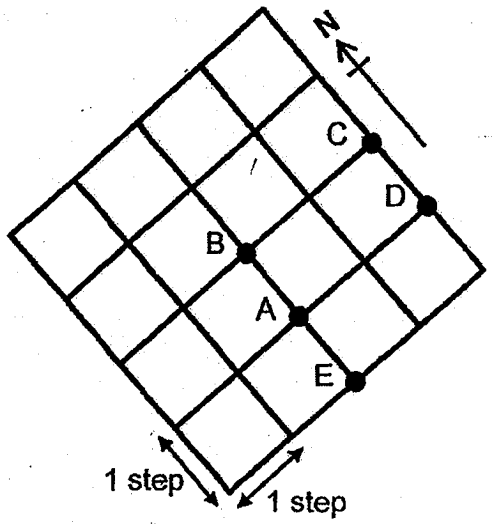
(3) 288°

(4) 324°

14. Cynthia followed the instructions below and ended at Point A in the end:

(i) Walk 2 steps to the West
(ii) Walk 1 step to the North
(iii) Walk 2 steps to the East

At which point did she start at first?



(1) E

(2) D

(3) C

(4) B

15. $\frac{1}{3}$ of the length of a table cloth is 45 cm shorter than $\frac{1}{2}$ of the length of a banner.

The total length of the table cloth and the banner is 390 cm. What is the length of the banner?

(1) 160 cm

(2) 183 cm

(3) 210 cm

(4) 237 cm

End of Booklet A

Name: _____ ( )

Class: Primary 6 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL (PRIMARY)

Primary 6 Mathematics

2019 Preliminary Examination

Paper 1

Booklet B

20 August 2019

Booklet A	**20**
Booklet B	**25**
Total (Paper 1)	**45**

15 questions
25 marks

Total Time for Booklets A and B: 1 hour

INSTRUCTIONS TO CANDIDATES

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

This booklet consists of 9 printed pages.

Questions **16** to **20** carry 1 mark 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. (5 marks)

Do not write in this space

16. Simplify $20 + 8 \times 10d \div 5 - d$.

Ans: _____

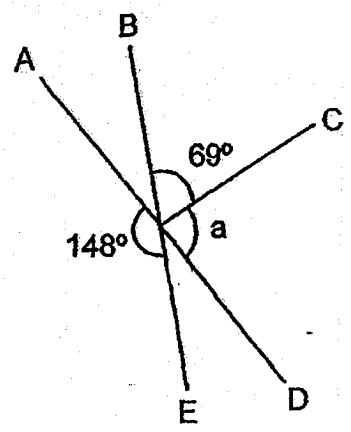
17. Write 690 thousandths as a decimal.

Ans: _____

18. Express 0.1% as a fraction.

Ans: _____

19. AD and BE are straight lines. Find ∠a.



Ans: _____ °

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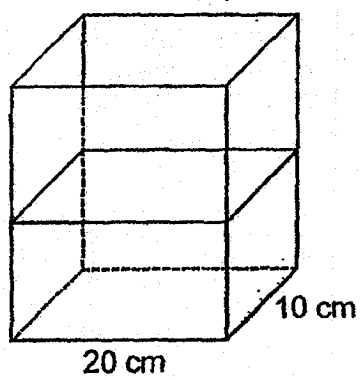
20. The container below is filled with 1700 ml of water. What is the height of the water level in the container?



Ans: _____ cm

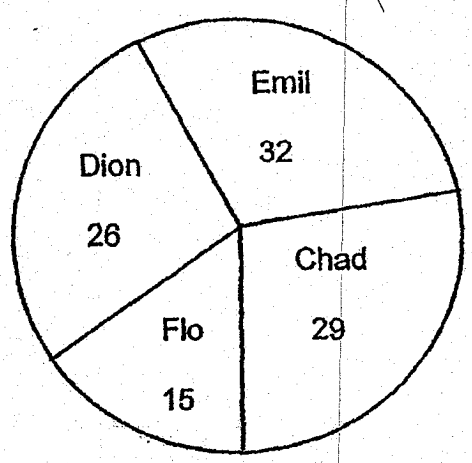
Questions **21** to **30** carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (20 marks)

Do not write in this space

21. Write down all the common factors of 28 and 70.

Ans : _____

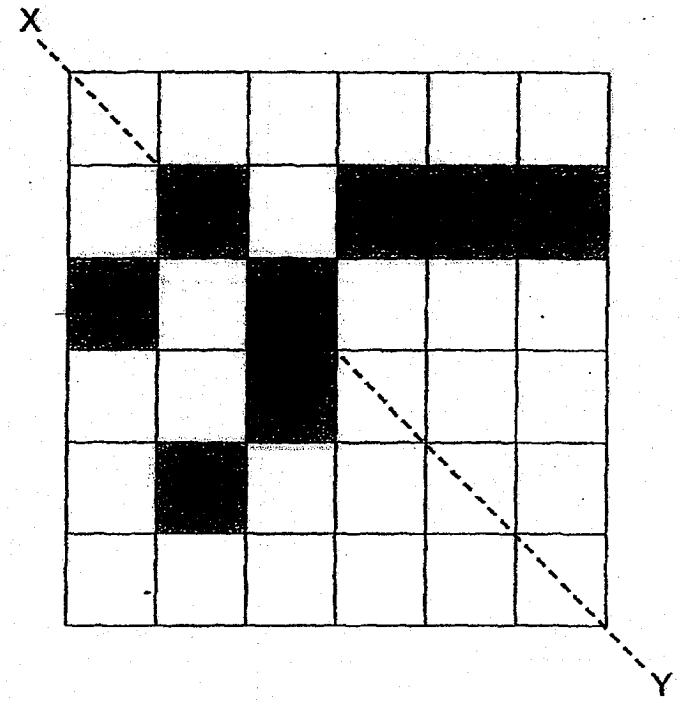
22. The pie chart below shows the number of cans 4 children collected for a recycling activity. What is the ratio of the total number of cans the 4 children collected to the number of cans Flo collected? Leave your answer in the simplest form.



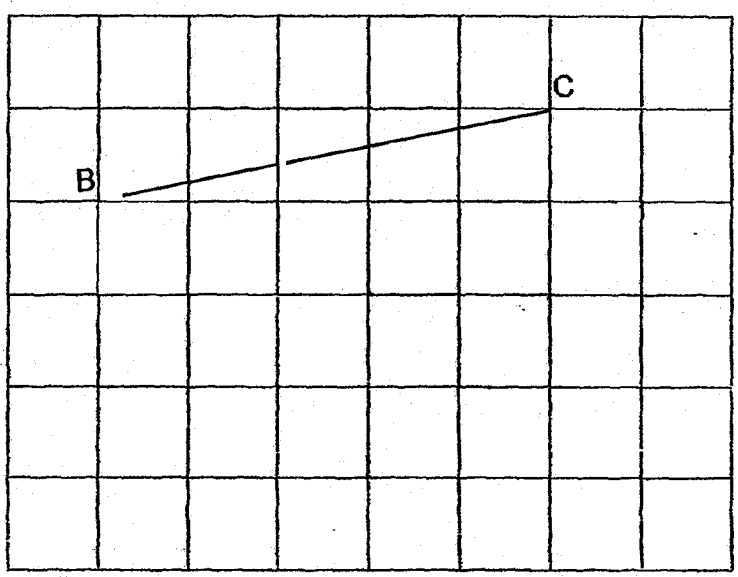
Ans : _____

23. The figure below is made up of squares. Shade four more squares to form a symmetric figure with XY as the line of symmetry.

Do not write in this space



24. In the square grid below, two sides of a triangle have been drawn. Complete the drawing of triangle ABC such that CA is perpendicular to AB. Then draw another three lines to form a rectangle ACDE.



2

25. The graph below shows the number of staplers, rulers and calculators sold at Good Deal Bookshop.

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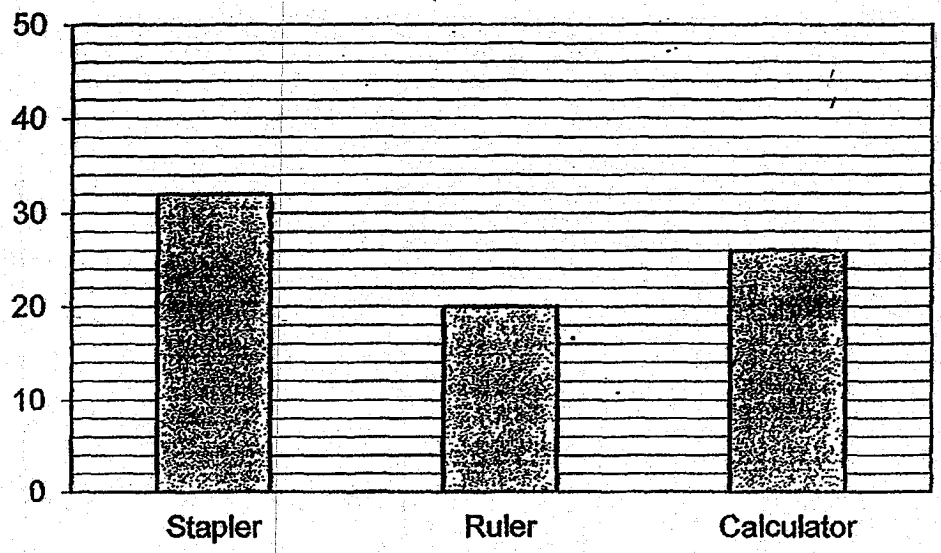


The table shows the prices of the stationery.

Type of stationery	Price per stationery
Stapler	$2
Ruler	$0.90
Calculator	$30

How much more money was collected from the total sale of staplers and calculators than the sale of rulers?

Ans: $_____

MARKS

26. The average of 4 different even numbers is 22. All the 4 numbers are 2-digit numbers. The biggest number is 26. What is the smallest possible number?

Do not write in this space

Ans: _____

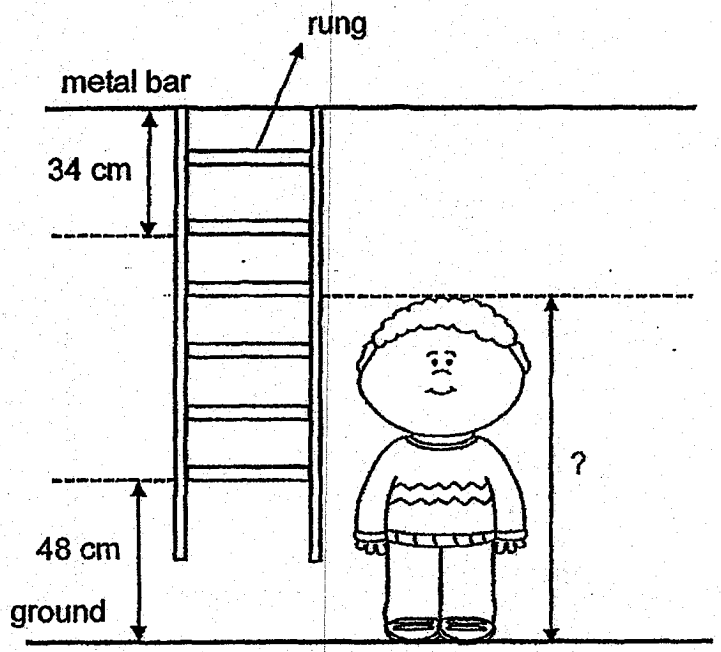
27. A bag contained a total of 123 blue cubes, orange cubes and green cubes at first. 27 blue cubes were removed from the bag and another 39 green cubes were put into the bag. The ratio of the number of blue cubes to the number of orange cubes to the number of green cubes became 1 : 3 : 5. How many green cubes did the bag contain at first?

Ans: _____

MARKS

28. The ladder beside Blake is hanging from a metal bar.
The last rung is 48 cm above the ground. What is Blake's height?

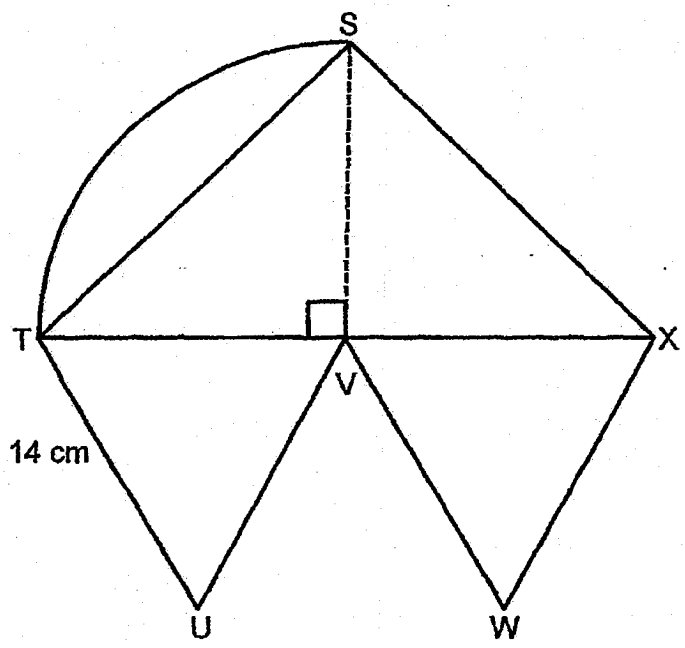
Do not write in this space



Ans: _____ m

29. The figure below is made up of a quarter circle, a triangle SVX and two equilateral triangles TVU and VXW. The perimeter of the figure is 98 cm and TU = 14 cm. What is the length of SX? (Take $\pi = \frac{22}{7}$)

Do not write in this space



Ans: _____ cm

30. Shing Wen had some hearts and 50 sticks. He used the hearts and sticks to make three figures that follow a pattern as shown below. Then he pasted the three figures onto a cardboard.

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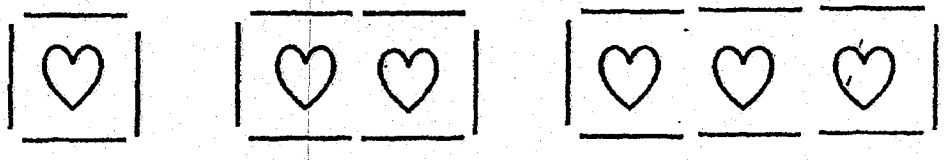


Figure 1

1 heart
4 sticks

Figure 2

2 hearts
6 sticks

Figure 3

3 hearts
8 sticks

Each statement below is either True, False or Not possible to tell . For each statement, put a tick (✓) in the correct column.

Statement	True	False	Not possible to tell
Shing Wen used all the hearts he had to make the three figures.			
Shing Wen would have enough sticks to continue with the pattern to make Figure 6.			

End of Paper 1

Name:_____( )

Class: Primary 6_____

CHIJ ST NICHOLAS GIRLS' SCHOOL (PRIMARY)

Primary 6 Mathematics

2019 Preliminary Examination

Paper 2

20 August 2019

Paper 1	45
Paper 2	55
Total Marks	00

_____

Parent's/Guardian's Signature

Time : 1 hour 30 minutes

INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
Write your answers in this booklet
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. Anan entered a number into his calculator. He added 11 to the number and then multiplied the sum by 22. Finally, he subtracted 48 from the product. In the end, he obtained 766 as the answer. What was the number Anan' entered into his calculator?

Ans : _____

2. A chef had a total mass of 6.05 kg of flour and sugar. He used $\frac{3}{4}$ of the flour and $\frac{1}{3}$ of the sugar to bake muffins. He had the same amount of flour and sugar left.

How much flour did he have at first?

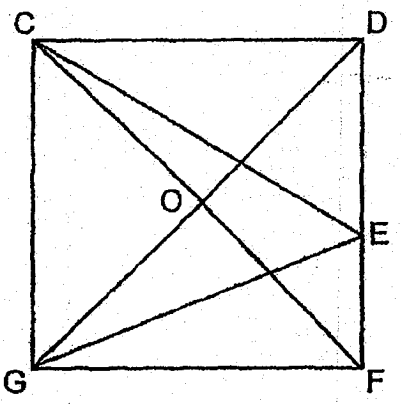
Ans : _____ kg _____ g

3. At an exhibition, the ratio of the number of men to the number of women was 10 : 3. Halfway through the exhibition, 110 men left and the number of men was $\frac{5}{12}$ of the total number of people who remained behind. How many women were there at the exhibition?

Do not write in this space

Ans : _____

4. CDFG is a square with O in the centre. CGE and CGO are triangles. What fraction of the square CDFG is unshaded?



Ans : _____

5. At 5.50 p.m., Mr Diresh left his office to drive 50 km back to his house. He had to pass by a factory and a library. The library was 45 km away from his office and was exactly in the middle of the factory and his house. It was 6.20 p.m. when he passed by the factory. What was the average speed that he was driving at from his office to the factory?

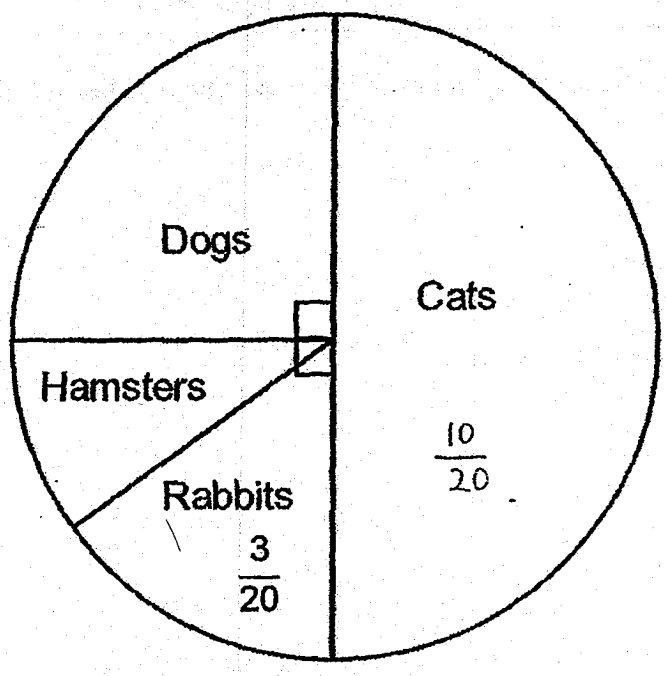
Do not write in this space

Ans : _____ km/h

For questions **6** to **17**, show your working clearly and write your answers in the spaces provided. The number of marks available is shown in the brackets ( ) at the end of each question or part-question. (45 marks)

Do not write in this space

6. The pie chart below shows the different animals adopted by an animal shelter.



(a) What fraction of all the animals adopted were hamsters?

(b) A total number of 84 cats and hamsters were adopted. How many animals were adopted altogether?

Ans : (a) _____ [1]

(b) _____ [2]

7. The table below shows the charges for domestic usage of water.

Do not write in this space

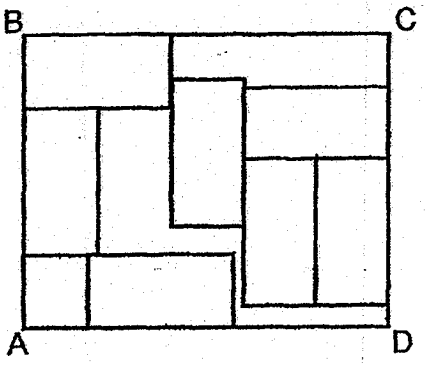
Amount of water used	Charges
Up to 40 m^3	146¢ per m^3
Above 40 m^3	102¢ per m^3

The Eng family paid a total amount of $86.96 in June. How much water did the family use in June?

Ans : _____ [3]

8. Some identical small rectangles lie within a large rectangle ABCD as shown. The length of each rectangle is 24 cm. What is the area of the shaded part?

Do not write in this space



Ans : _____ [3]

9. Hathi had 180 twenty-cent coins and some five-cent coins. 80% of her coins were five-cent coins. Hathi used up 75% of the five-cent coins. What was the total value of the five-cent coins that she used up?

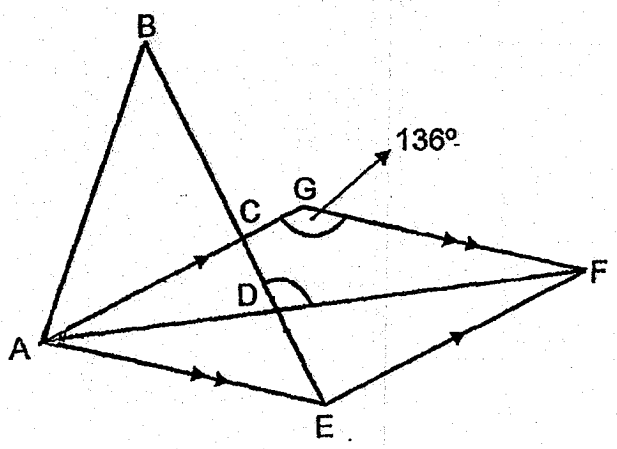
Do not write in this space

Ans : _____ [3]

10. In the figure below, ABC is a right-angled triangle. All the sides of AEFG are equal. AF and BE are straight lines.

(a) Name an isosceles triangle in the figure.

(b) Find ∠BDF.



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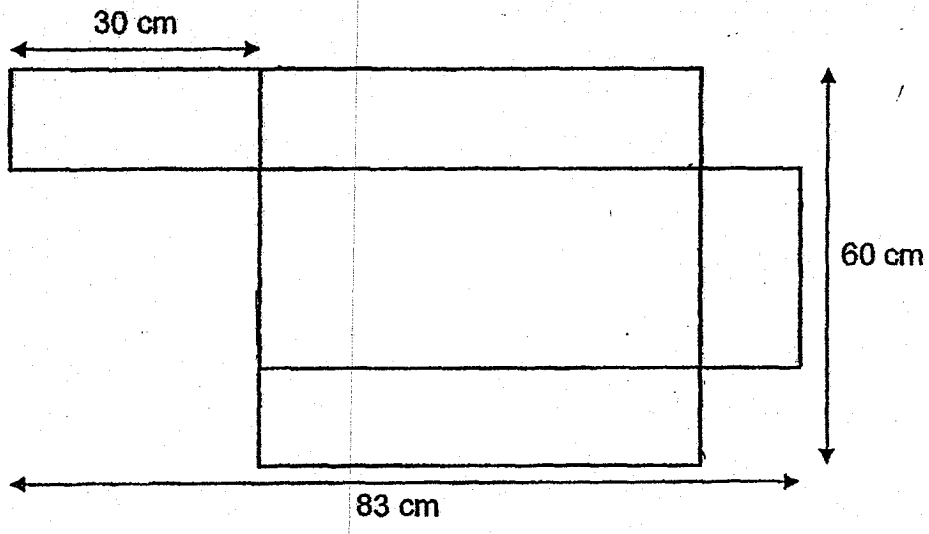
Ans : (a) Triangle _____ [1]

(b) _____ [2]

11. The figure below shows the net of an open rectangular box.
Find the volume of the box.



Do not write in this space

Ans : _____ [3]

12. Irin is now $2r$ years old. She is 10 years younger than Kexin. Junita is half the total age of Irin and Kexin.

Do not write in this space

(a) How old is Junita now? Leave your answer in terms of r.

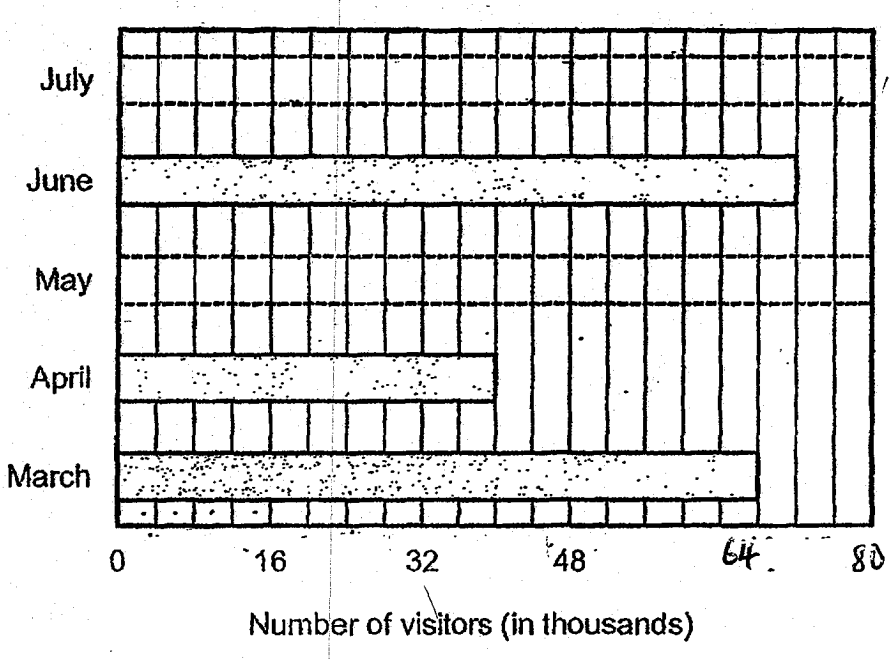
(b) Given $r = 7$, what was the total age of the three girls 4 years ago?

Ans : (a) _____ [2]

(b) _____ [2]

13. The bar graph below shows the number of visitors at a museum over five months. The two bars that show the number of visitors in May and July have not been drawn.

Do not write in this space



(a) In May, the number of visitors decreased by 30% from April. There were 16 000 fewer visitors in May than in July. Draw the two bars representing the number of visitors in May and July. [3]

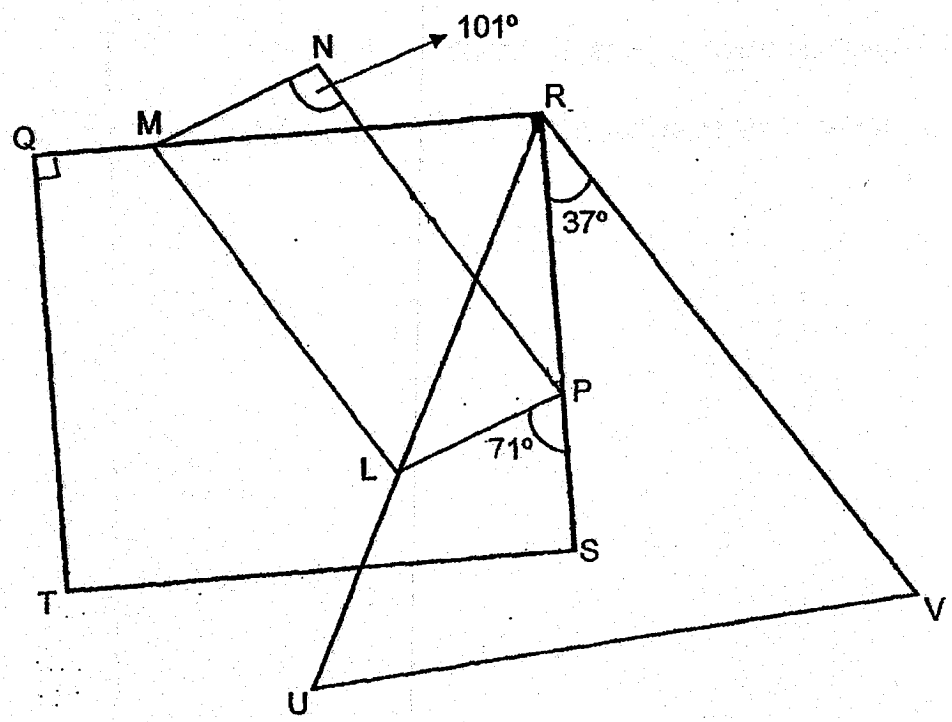
(b) Write down all the months in which there were at least 44 000 visitors at the museum.

Ans : _____ [1]

14. In the figure below, QRST is a rectangle, MNPL is a parallelogram and RUV is an equilateral triangle.

(a) Find ∠URQ.

(b) Find ∠MLR.



Do not write in this space

Ans : (a)_____ [1]

(b)_____ [3]

15. Ivana has $189 and Janie has $93 at the end of January. Starting from February, Ivana saves $4 every week and Janie saves $10 every week.

Do not write in this space

(a) Janie wants to have the same total amount of money as Ivana.

(i) How many weeks does Janie need to save so that she will have the same total amount of money as Ivana?

(ii) What is this total amount of money Janie will have?

(b) Janie wants to have $120 more than Ivana. How much money will Ivana have?

Ans : (a) (i) _____ [2]

(ii) _____ [1]

(b) _____ [2]

16. Matthias spent one week to read a book. He read some pages every day, starting on Monday.
On Monday, the ratio of the number of pages read to the number of pages not read was 1 : 5.
After he had read another 120 pages on Tuesday, 70% of the book was not read.
For the rest of the week, he read the same number of pages every day.
How many pages did Matthias read every day for the rest of the week?

Do not write in this space

Ans : _____ [5]

17. At a camp, Mrs Sitoh arranged the pupils into 4 equal groups of boys and 5 equal groups of girls. In every group of girls, the number of girls was 5 more than the number of boys in each group. $\frac{3}{8}$ of all the pupils at the camp were boys. How many pupils were there altogether at the camp?

Do not write in this space

Ans : _____ [5]

End of Paper

SCHOOL : CHIJ PRIMARY SCHOOL
LEVEL : PRIMARY 6
SUBJECT : MATH
TERM : 2019 PERLIM

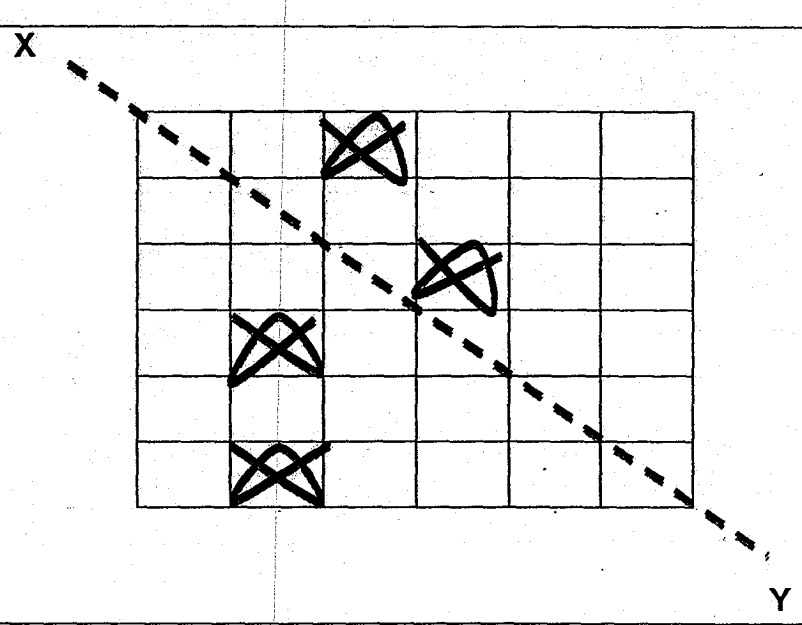
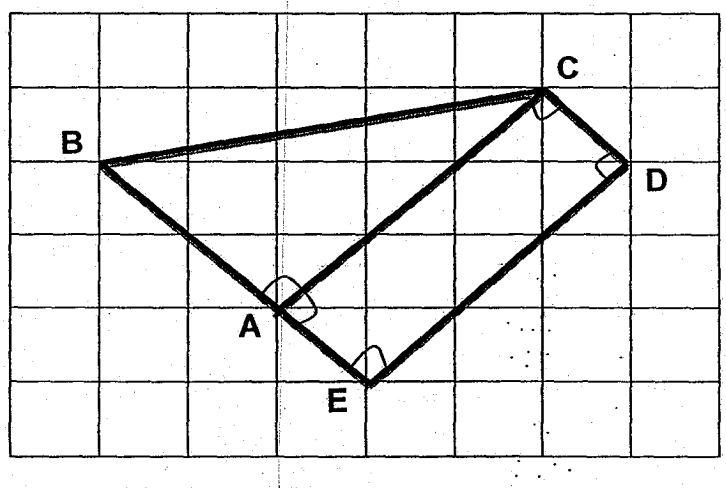
PAPER 1 BOOKLET A

Q 1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
2	4	1	4	2	4	3	1	4	3

Q 11	Q12	Q13	Q14	Q15
2	1	2	1	3

PAPER 1 BOOKLET B

Q16)	20 + 8 x 10d ÷ 5 – d = 20 + 80d ÷ 5 – d = 20 + 16d – d = 20 + 15d ANS:(15d + 20)
Q17)	0.001 x 690 = 0.001 x 10 x 69 = 0.01 x 69 = 0.69
Q18)	0.1% = $\frac{1}{1000}$
Q19)	180° – 148° = 32° 32° + 69° = 101° 180° – 101° = 79°
Q20)	1700 ÷ 20 ÷ 10 = 17 ÷ 2 = 8.5 cm
Q21)	1, 2 ,7 and 14
Q22)	26 + 32 + 29 + 15 = 102 102 : 15 = 34 : 5

Q23)	
Q24)	
Q25)	32 x 2 = 64 26 x 30 = 780 20 x 0.9 = 0.9 x 10 x 2 = 9 x 2 = 18 64 + 780 = 844 844 – 18 = $826
Q26)	4 x 22 = 88 26 + 16 + 24 + 22 = 88 ANS: 16
Q27)	123 + 39 = 162 162 – 27 = 135 135 ÷ 9 = 15 15 x 5 = 75 75 – 39 = 36

Q28)

34 ÷ 2 = 17
17 x 3 = 51
51 + 48 = 99
99cm = 0.99m

Q29)

$\frac{1}{4} \times \frac{22}{7} \times 28 = \frac{22}{7} \times \frac{7}{1} = 22$

98 – 22 – 14 – 14 – 14 – 14 = 98 – 78
= 20 cm

Q30)

True	False	Not
		√
	√	

PAPER 2

Q1)

766 + 48 = 814
814 ÷ 22 = 37
37 – 11 = 26

Q2)

$\frac{1}{4}$ of the flour = $\frac{2}{3}$ of the sugar

$\frac{2}{8}$ of the flour = $\frac{2}{3}$ of the sugar

8 + 3 = 11
6.05 ÷ 11 = 0.55
0.55 x 8 = 4.4
4.4kg = 4kg 400g

Q3)

M : W	M : W
10 : 3	70 : 21
5 : 7	15 : 21

12 – 5 = 7
70 – 15 = 55
110 ÷ 55 = 2
2 x 21 = 42

Q4)

$1 - \frac{1}{4} = \frac{3}{4}$

Q5)

50 – 45 = 5
45 – 5 = 40
40 ÷ 30 = $1\frac{1}{3}$
$1\frac{1}{3}$ x 60 – 80 km/h

Q6)	a) $\frac{1}{4} - \frac{3}{20} = \frac{1}{10}$ b)10 + 2 = 12 84 ÷ 12 = 7 7 x 20 = 140
Q7)	146¢ = $1.46 102¢ = $1.02 $1.46 x 40 = $58.40 $186.96 – $58.40 = $28.56 $28.56 ÷ $1.02 = 28 28 + 40 = 68m³
Q8)	24 ÷ 2 = 12 24 x 12 = 288 288 x 7 = 2016 24 + 12 + 24 = 60 24 + 12 + 12 = 48 60 x 48 = 2880 2880 – 2016 = 864cm²
Q9)	20¢ : 5¢ 180 ÷ 2 = 90 2 : 8 X10 x90 180 : 720 $\frac{75}{100}$x 720 = 540 540 x $0.05 - $27
Q10)	a)AEF b)180° – 136° = 44° 44° ÷ 2 = 22° 180° – 90° – 22° = 68° 180° – 68° = 112°
Q11)	60 – 30 = 30 30 ÷ 2 = 15 83 – 30 – 15 = 38 38 x 30 x 15 = 17100cm³

Q12)

a)10 ÷ 2 = 5

r + r + 5 = (2r + 5) years old

b)r = 7

r + r + r + r + r + r + 10 + 5

=(7 x 6) + 10 + 5 = 57

57 – 4 – 4 – 4 = 45 years

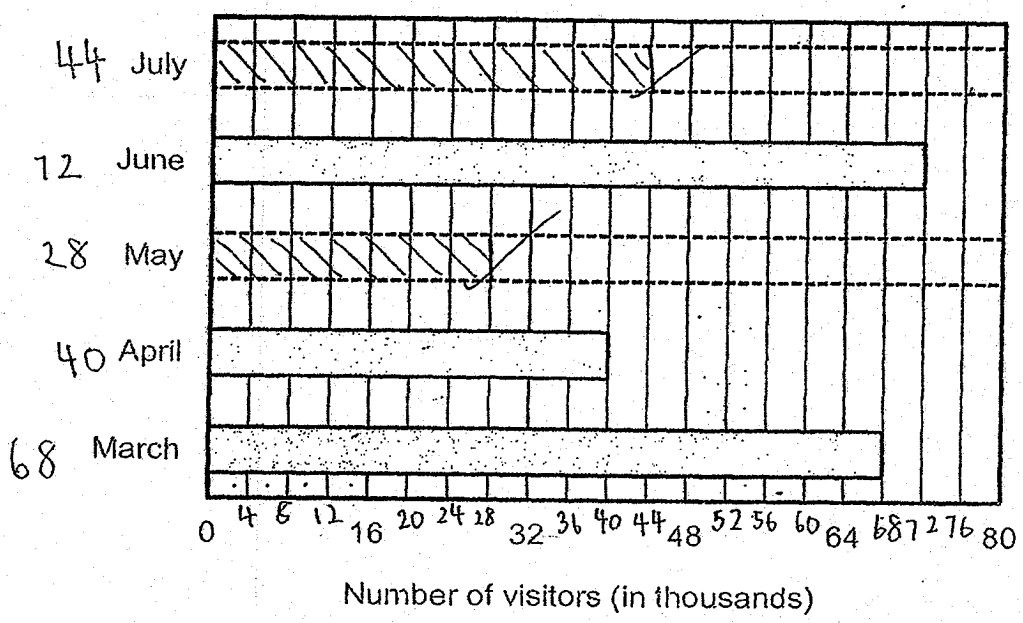
Q13)

a)$\frac{7}{10}$x 40 = 28

16000 ÷ 1000 = 16

28 + 16 = 44

b)March, June and July



Q14)

a)180° ÷ 3 = 60°

60° – 37° = 23°

90° – 23° = 67°

b)180° – 71° = 109°

180° – 109° – 23° = 48°

101° – 48° = 53°

Q15)

a)i)189 – 93 = 96

10 – 4 = 6

96 ÷ 6 = 16 week

aii)16 x 10 = 160

160 + 93 = $253

	b)120 ÷ 6 = 20 20 + 16 = 36 36 x 4 = 144 189 + 144 = $333
Q16)	$\frac{3}{10} - \frac{1}{6} = \frac{2}{15}$ 120 ÷ 2 = 60 60 ÷ 2 = 30 $\frac{7}{10}$x3 = $\frac{21}{30}$ 30 x 21 = 630 7 – 2 = 5 630 ÷ 5 = 126
Q17)	$\frac{5}{8}$ → 20 units = 15 units + 25 5 units = 25 1unit = 25 ÷ 5 = 5 5 x 32 = 160