AI TONG SCHOOL

2019

PRELIMINARY EXAMINATION

PRIMARY 6

STANDARD MATHEMATICS
PAPER 1
(Booklets A and B)

DURATION : 1 h

DATE : 23 AUGUST 2019

INSTRUCTIONS

Do not open the booklet until you are told to do so.
Follow all instructions.
Answer all questions.
Shade your answers in the Optical Answer Sheet (OAS) provided.
You are **not** allowed to use a calculator.

Name: _____( )

Class: Primary 6 _____ **Marks:**

6M _____

Paper 1	/45
Paper 2	/55
Total	/100

Parent's Signature : _____

Date : _____

Paper 1
Booklet A

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.

(20 marks)

---

1 In 9 783 124, the digit 7 stands for 7 × _____.

(1) 100
(2) 1000
(3) 10 000
(4) 100 000

2 Spencer spent 40% of his money on a wallet and had $240 left.
How much did the wallet cost?

(1) $160
(2) $144
(3) $96
(4) $80

3 Simplify $6 + 9r - 2 \div 2r$.

(1) $7r + 4$
(2) $7r + 8$
(3) $11r + 4$
(4) $11r - 8$

4 Express 1.4 hours in hours and minutes.

(1) 1 h 4 min
(2) 1 h 10 min
(3) 1 h 24 min
(4) 1 h 40 min

---

5 What is the digit in the tenths place in the sum of 44.2 and 0.81?

(1) 1

(2) 0

(3) 5

(4) 4

6 Ahmad, Brayden and Kelly shared a packet of candies in the ratio of 2 : 3 : 4. Kelly had 24 candies. How many candies were there in the packet?

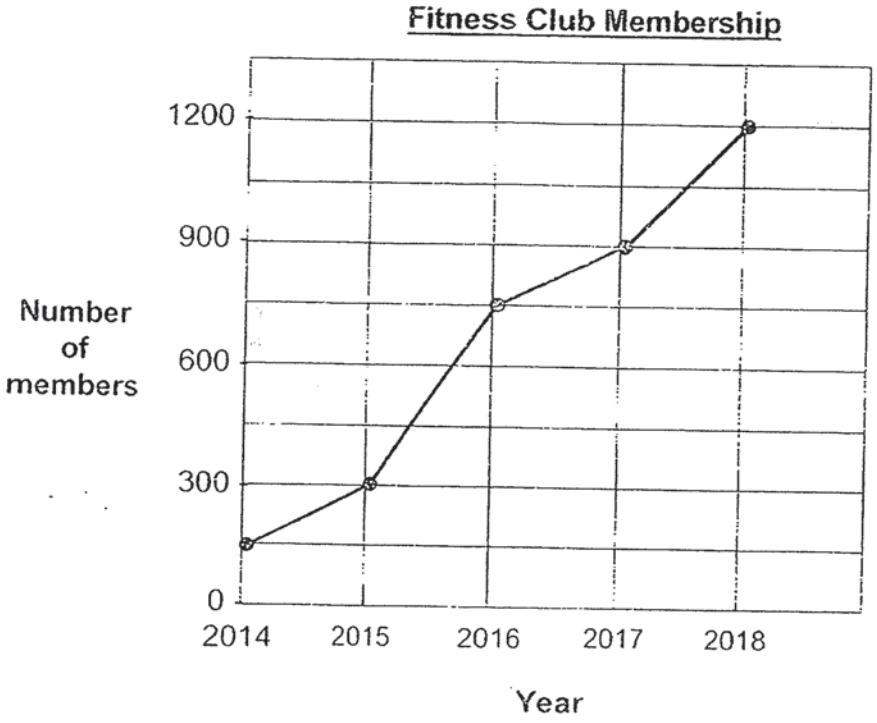
(1) 72

(2) 54

(3) 36

(4) 30

The line graph below shows the number of members in a fitness club from 2014 to 2018. Study the graph and answer questions 7 and 8.



7 How many members were there in 2016?

(1) 700

(2) 750

(3) 800

(4) 850

8 Between which 2 years was there a 100% increase in membership?

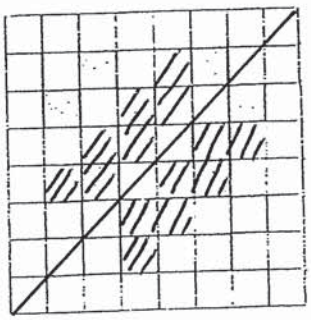
(1) 2014 and 2015

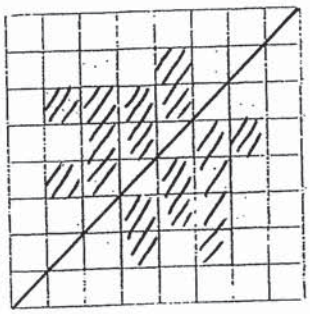
(2) 2015 and 2016

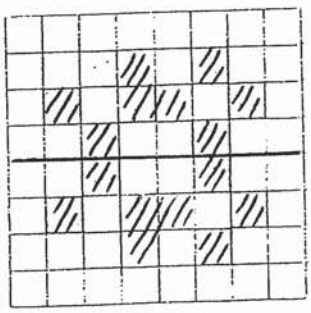
(3) 2016 and 2017

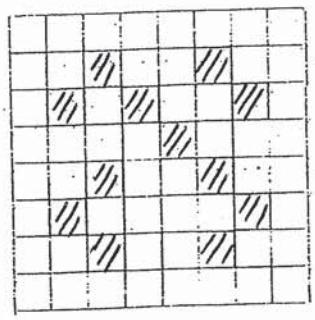
(4) 2017 and 2018

9 Which figure below **does not** have any line of symmetry?

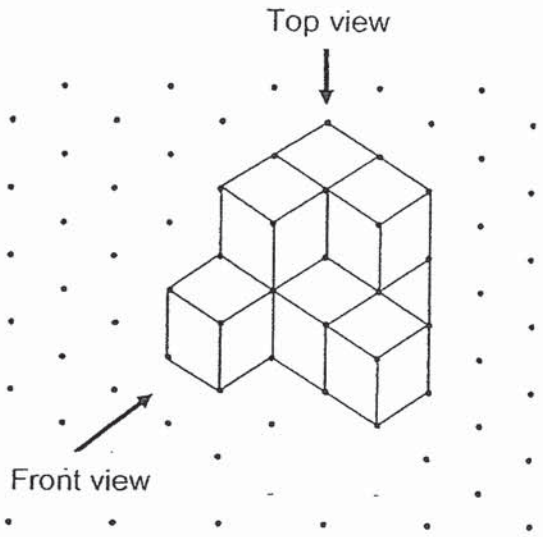
(1) 

(2) 

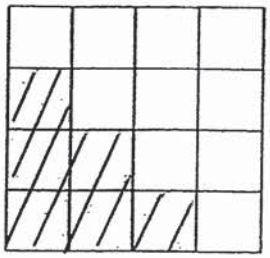
(3) 

(4) 

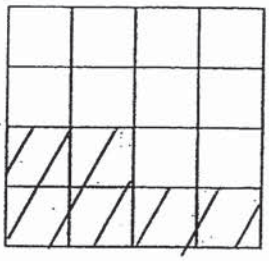
10 The solid shown is made up of identical unit cubes. Which of the following shows the front view the solid?



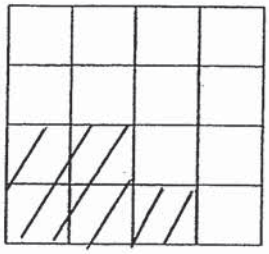
(1)



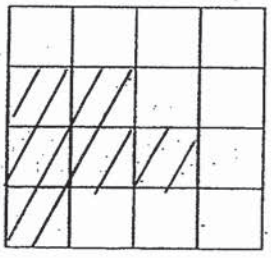
(2)



(3)



(4)



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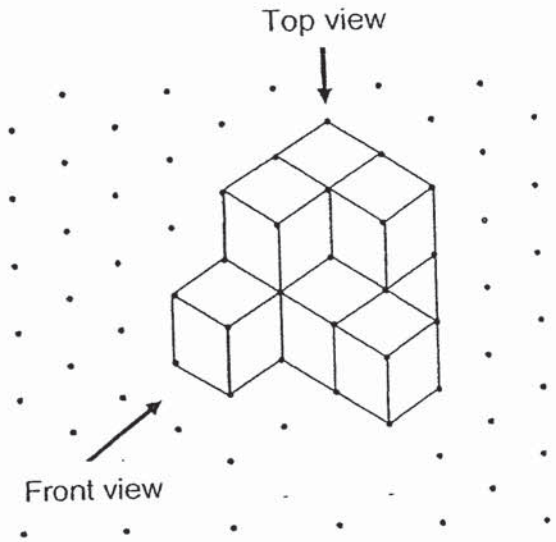
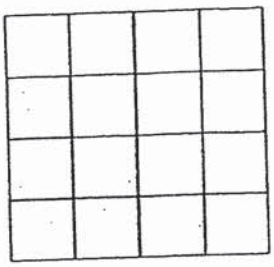
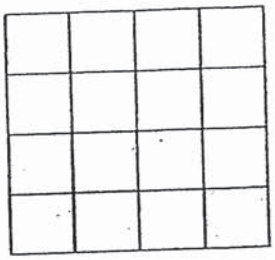


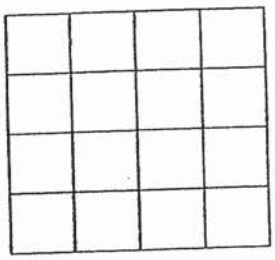
(1)



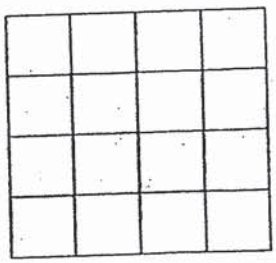
(2)



(3)



(4)



12 Peter is 13 years old now. His father is 3 times as old as he. What is their total age in 5 years' time?

(1) 44 years

(2) 52 years

(3) 57 years

(4) 62 years

13 Jeff and 3 of his classmates scored an average of 80 marks in their Chinese test. If Jeff had scored 79 marks, their average score would have been 83 marks. How many marks did Jeff score?

(1) 67

(2) 76

(3) 82

(4) 91

14 Mdm Kalsa sold 120 cupcakes in the morning and 40% of the remaining cupcakes in the afternoon. The number of cupcakes left in the end was $\frac{1}{3}$ of what she had at first. How many cupcakes were sold in the afternoon?

(1) 40

(2) 60

(3) 150

(4) 270

15 Some students are folding paper cranes during a craft lesson.
In 9 minutes, 5 students can fold 10 paper cranes. At this rate, how long does it take for 3 students to fold 54 paper cranes altogether?

(1) 18 min

(2) 27 min

(3) 45 min

(4) 81 min

Paper 1
Booklet B

Questions 16 to 20 carry 1 mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

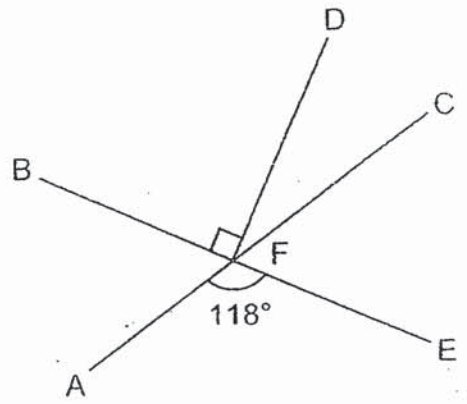
(5 marks)

Do not write in this space

16 Mr Tan sold his car for $163 458. Round the amount to the nearest thousand dollars.

Ans: $_____

17 In the figure, AFC and BFE are straight lines. Find ∠CFD.



Ans: _____

Do not write in this space

18 Shan Shan counted a total of 50 sheep and chicken at a farm. She also counted the number of legs of these animals. Help her complete the table below correctly.

	Number of animals	Number of legs
Sheep (4 legs each)	(a)_____	(c)_____
Chicken (2 legs each)	(b)_____	24

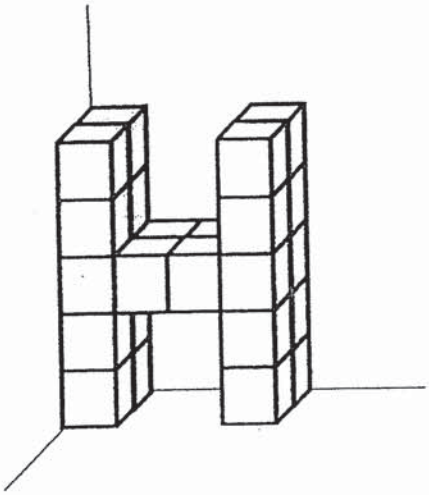
19 Stella had $\$m$. She spent $\frac{2}{5}$ of it at the bookshop.

How much money had she left?

Ans: $ _____

Do not write in this space

20 The solid below is made up of 1-cm cubes to form the letter H.
What is the volume of the solid?



Ans: _____ cm^3

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 Jack took $\frac{1}{2}$ h to walk 3 km at an average speed of 6 km/h, and $1\frac{1}{2}$ h to walk another 6 km at an average speed of 4 km/h. What was his average speed for the whole journey?

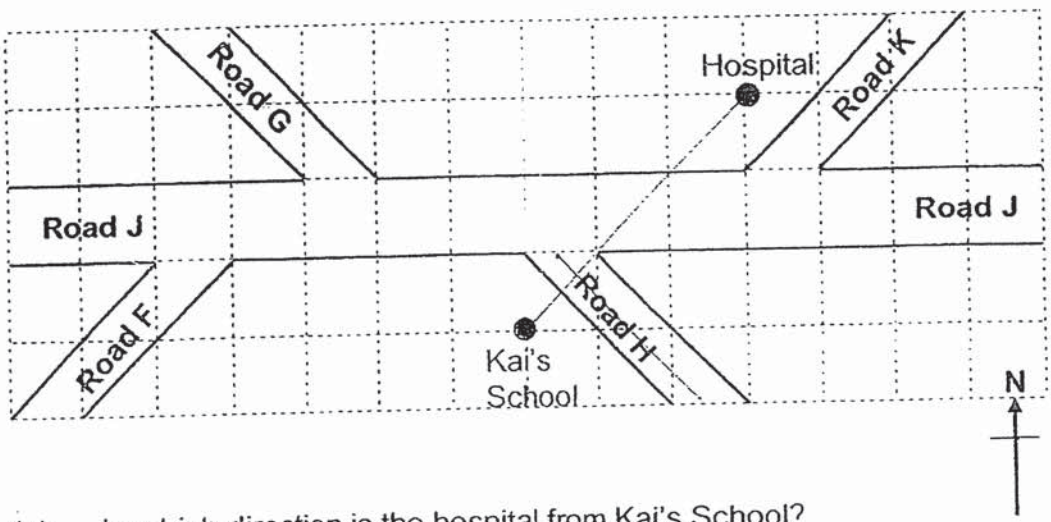
Ans: _____ km/h

22 Kate had 28 more cards than Raj at first. Then, Raj gave 12 of his cards to Kate. In the end, Kate had 3 times as many cards as Raj.
How many cards did Raj have at first?

Ans: _____

23 The figure below shows a map drawn on a square grid around Kai's school.

Do not write in this space



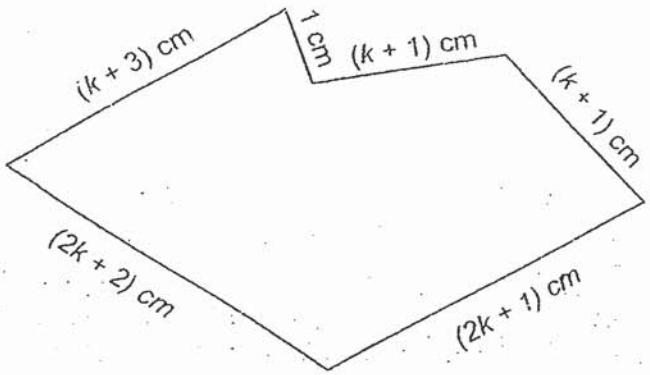
(a) In which direction is the hospital from Kai's School?

(b) Kai was walking along Road J. When he turned into another road, he faced south-east. Which road did he turn into?

Ans: (a) _____

(b) _____

24 Marcus used a piece of wire to make the figure shown below.

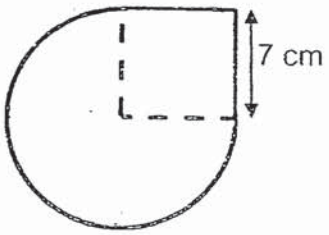


What was the length of the wire used by Marcus?
Leave your answer in the simplest form in terms of k.

Ans: _____ cm

25 The figure made up of three identical quarter circles and a square of side 7cm. Find the perimeter of the figure. Take $\pi = \frac{22}{7}$.

Do not write in this space



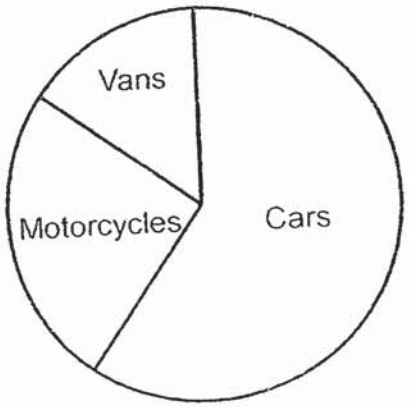
Ans: _____ cm

26 Jake's mass is $\frac{4}{7}$ of Lionel's mass. Matthew's mass is $\frac{5}{8}$ of Jake's mass. What is the ratio of Jake's mass to Lionel's mass to Matthew's mass?

Ans: _____

Do not write in this space

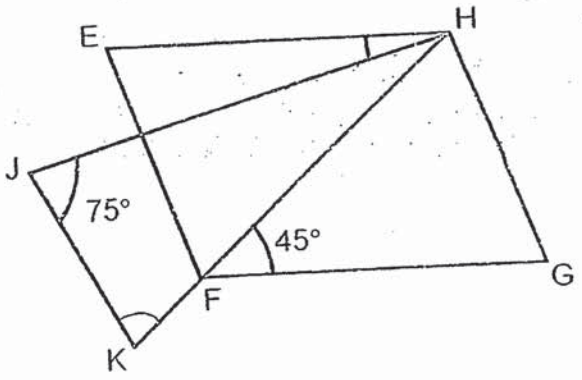
27 The pie chart below shows 3 types of vehicles that were parked in a carpark. There were 15 motorcycles. Study the pie chart to fill in the table below.



Each statement below is either true, false or not possible to tell from the information given. For each statement, put a tick (✓) in the correct column.

Statement	True	False	Not possible to tell
More than half the vehicles were cars.			
There were 10 more motorcycles than vans in the carpark.			

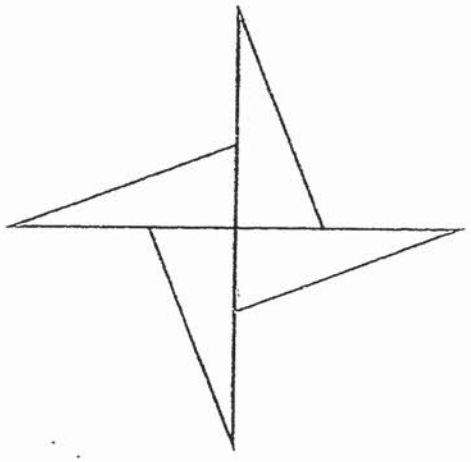
28 In the figure, EFGH is a parallelogram. HJ = HK, ∠HJK = 75° and ∠HFG = 45°. Find ∠EHJ.



Ans: _____

29 The figure below is made up of 4 identical right-angled triangles. The shortest side of each triangle is 6 cm and the perimeter of each triangle is 32 cm. Find the perimeter of the figure.

Do not write in this space



Ans: _____ cm

30 $\frac{11}{12}$ m of string is cut into shorter pieces. Each of the shorter pieces must measure $\frac{1}{6}$ m. What is the length of the remaining piece of string?

Ans: _____ m

End of Paper 1

AI TONG SCHOOL

2019

PRELIMINARY EXAMINATION

PRIMARY 6

STANDARD MATHEMATICS
PAPER 2

DURATION : 1 h 30 min

DATE : 23 AUGUST 2019

INSTRUCTIONS

Do not open the booklet until you are told to do so.
Follow all instructions.
Answer all questions.
You are allowed to use a calculator.

Name: _____ _____ _____ ( )

Class: Primary 6 _____

6M _____ **Marks:**

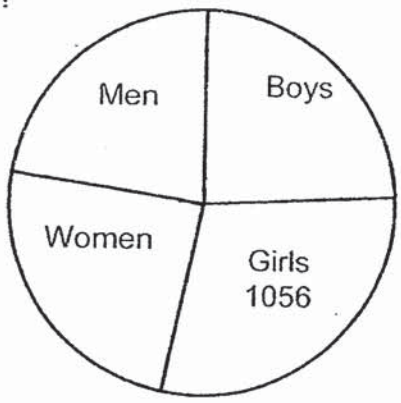
Parent's Signature	: _____
Date	: _____

55

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 The pie chart below shows the number of visitors to a Theme Park last Saturday. There were a total of 3520 visitors.
What percentage of the visitors were men?



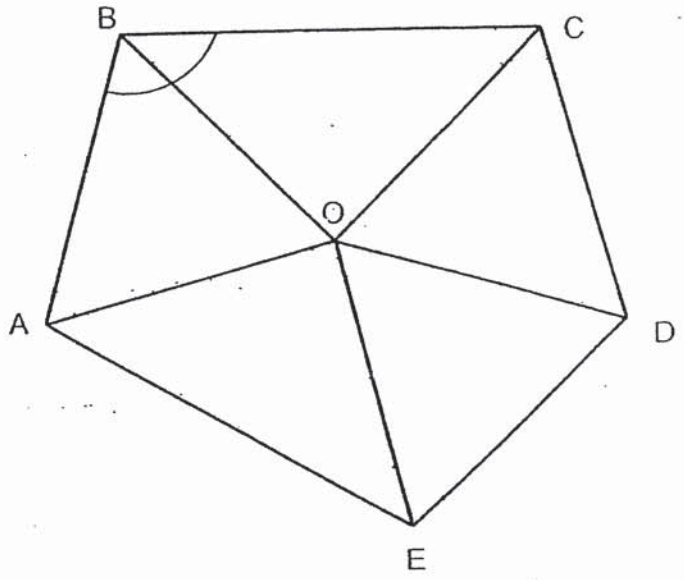
Ans: _____ %

2 Box A when empty has a mass of 1.8 kg. It has a mass of 21.4 kg when it contains 8 identical packets of flour and 6 identical packets of salt. Each packet of flour has a mass of 2 kg 60 g. What is the mass of each packet of salt? Give your answer in kilograms.

Ans: _____ kg

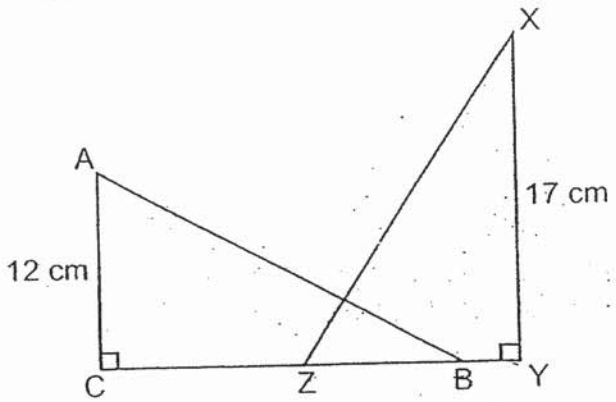
Do not write in this space.

3 In the figure, AOB, EOD and DOC are equilateral triangles. AE = BC
Find ∠ABC.



Ans: _____

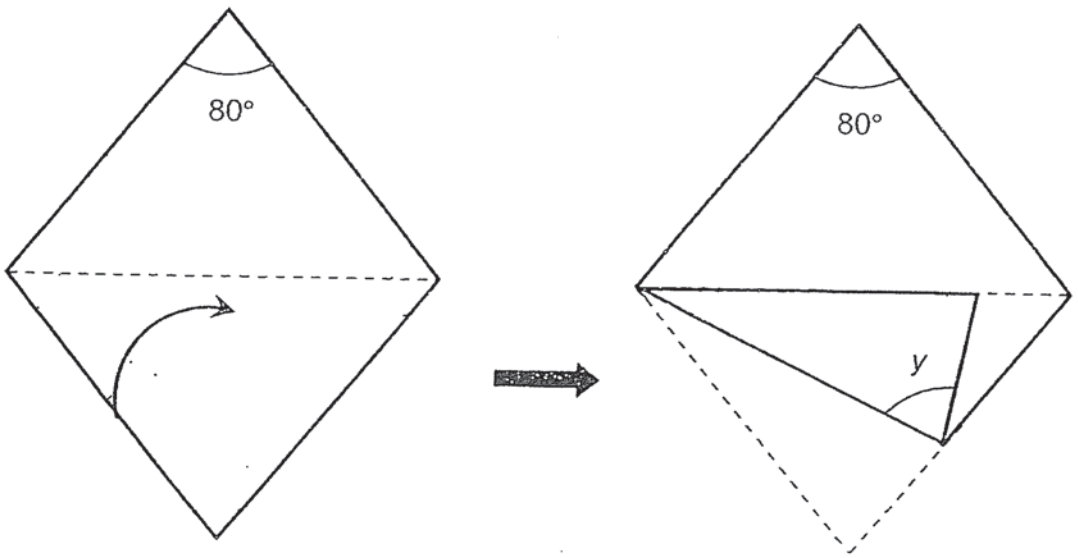
4 In the figure below, ABC and XYZ are identical right-angled triangles.
The total area of the shaded parts is 130 cm².
Find the area of the unshaded part.



Ans: _____ cm²

5 A piece of paper in the shape of a rhombus is folded along the dotted line as shown. Find $\angle y$.

Do not write in this space.



Ans: _____

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 bracket [ ] at the end of each question or part-question. For questions which require units, give your answers in the units stated

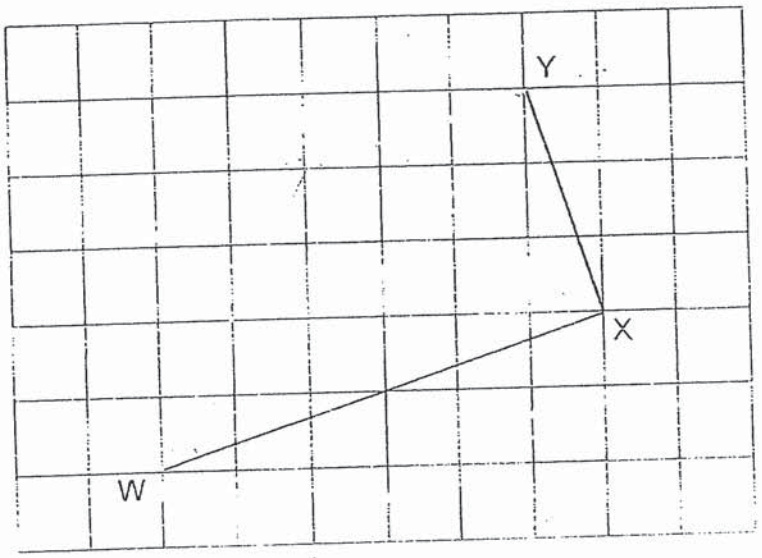
(45 marks)

Do not write in this space

6 In the square grid, WX and XY are two sides of a trapezium.
WX is parallel to ZY. WX is twice the length of ZY.

(a) Complete the drawing of trapezium WXYZ. Label Z.

(b) Measure and write down the size of ∠XWZ.

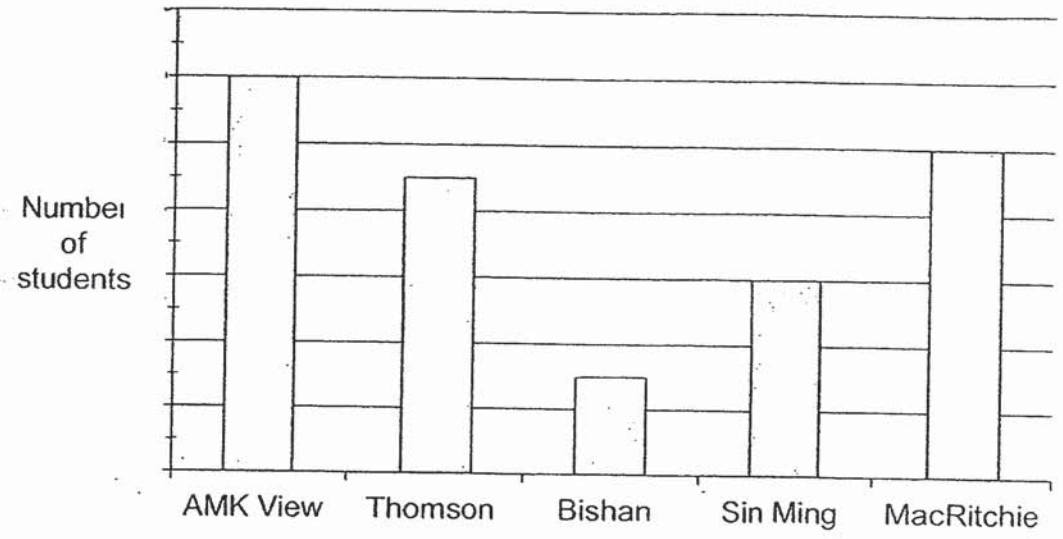


[2]

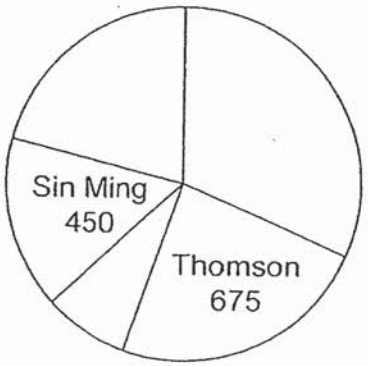
Ans: (b) _____ [1]

7 The graph below shows the number of students in five different schools in 2019. The number of students is not shown on the scale.

Do not write in this space



The same data is partially shown in the pie chart below:



(a) The total enrolment of two of the schools is equal to the enrolment of AMK View School. Which two schools are these?

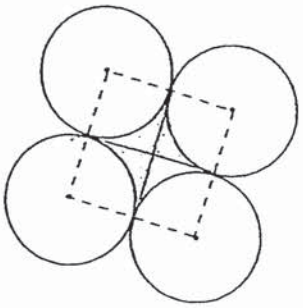
(b) How many students are there in MacRitchie School?

Ans : (a) _____ and _____ [1]

(b) _____ [2]

8 Four identical circles, each of radius 16 cm, are touching each other as shown. The dotted lines join the centres of the circles to form a square. Find the area of the shaded part. Take $\pi = 3.14$.

Do not write in this space.



Ans: _____ [3]

9 Pete and Dave started driving at the same time from the same place but in opposite directions along a straight road. After 3h, they were 510.3 km apart. Pete's average speed was 11.2 km/h faster than Dave's average speed. What was Dave's average speed?

Ans: _____ [3]

10 At the Home Appliance Warehouse Sale, Mr Chua bought a vacuum cleaner and a washing machine for a total of $2980 after discount. He paid $464 more for the washing machine than the vacuum cleaner.

Do not write in this space

(a) Find the percentage discount given for the vacuum cleaner.

(b) Find the usual price of the washing machine.

Vacuum Cleaner
Usual price: $1480
Discount: [redacted]

Washing Machine
Discount: 20%

Ans: (a)_____ [2]

(b)_____ [2]

11 The number of boys and girls in a hall was in the ratio 4 : 5.
After 170 boys and 20% of the girls went back to their classrooms, the ratio of the number of boys to the number of girls in the hall became 1 : 2.
How many children were there in the hall in the end?

Do not write in this space.

Ans: _____ [3]

12 Eddy sold phone cards during a part-time holiday job. For every phone card sold, he would receive $0.60. For every 20 phone cards sold, he would receive an additional $4.50.

Do not write in this space.

(a) How much did he receive after selling 20 phone cards?

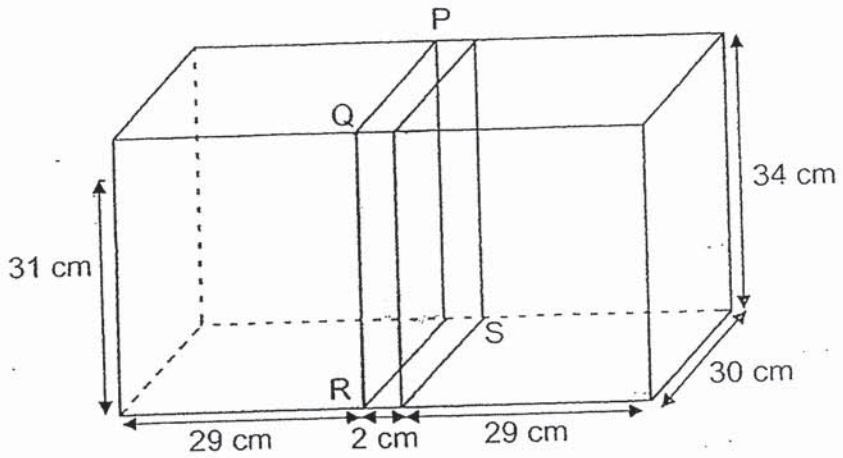
(b) How many phone cards did Eddy need to sell to receive at least $150?

Ans: (a) _____ [1]

(b) _____ [3]

13 A rectangular tank measures 60 cm by 30 cm by 34 cm. It is divided into two parts by a piece of plastic PQRS that is 2 cm thick. One part of the container contains water to a depth of 31 cm. When the piece of plastic PQRS is removed, what is the height of the water level in the tank? Give your answer correct to 1 decimal place.

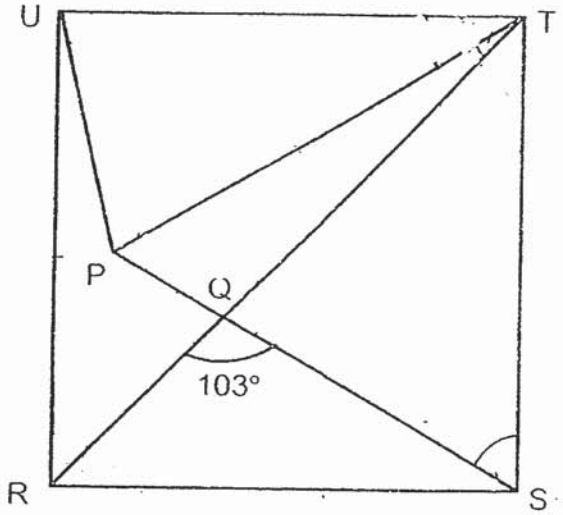
Do not write in this space.



Ans: _____ [4]

14 In the figure, RSTU is a square. TU = TP and ∠RQS = 103°.
Find ∠PTU.

Do not write in this space.



Ans: _____ [4]

15 Three girls had 144 sweets altogether. Aileen gave some of her sweets to Betty and Betty's sweets were doubled. Then, Betty gave some of her sweets to Catty and Catty's sweets were doubled. As a result, the three girls had an equal number of sweets each. How many sweets did Betty have at first?

Do not write in this space.

Ans: _____ [4]

16 The figures in the pattern below are made up of dots.

Do not write in this space.

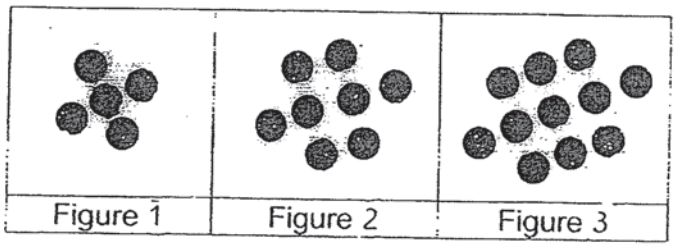


Figure 1 | Figure 2 | Figure 3

(a) How many dots are required to form the Figure 5?

(b) Write down the number of dots in the Figure 50.

(c) Which Figure has 269 dots?

Ans: (a) _____ [1]

(b) _____ [2]

(c) _____ [2]

17 Mrs Sim sold some tennis rackets and badminton rackets for $17 043. Each tennis racket cost $273 and each badminton racket cost $\frac{3}{7}$ as much as the tennis racket. $\frac{2}{5}$ of the rackets sold were tennis rackets.

Do not write in this space.

(a) How much did each badminton racket cost?

(b) How many badminton rackets were sold?

Ans: (a) _____ [1]

(b) _____ [4]

END OF PAPER
CHECK YOUR WORK CAREFULLY !

SCHOOL : AI TONG PRIMARY SCHOOL
LEVEL : PRIMARY 6
SUBJECT : MATH
TERM : 2019 PRELIM

PAPER 1 BOOKLET A

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

Q 11	Q12	Q13	Q14	Q15
2	4	1	2	4

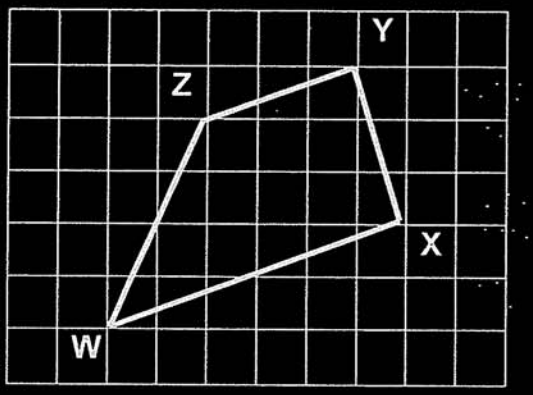
PAPER 1 BOOKLET B

Q16)	$163000
Q17)	28°
Q18)	a)38 b)12 c)152
Q19)	$\$(\frac{3m}{5})$
Q20)	$24cm^3$
Q21)	3 + 6 = 9 ½ + 1½ = 2 9 ÷ 2 = 4.5km/h
Q22)	2u→12 + 28 + 12 = 52 1u→26 26 + 12 = 38

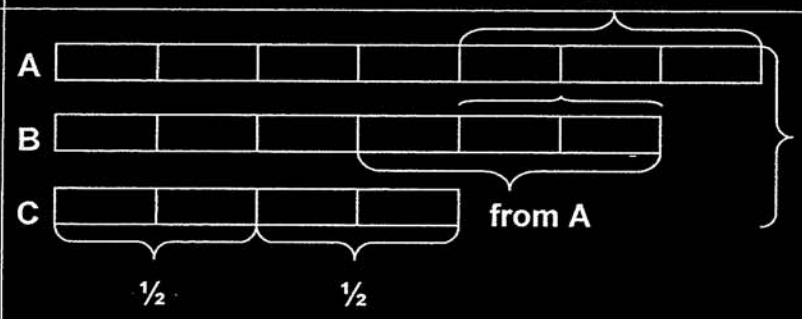
Q23)	a)North-east b)Road H
Q24)	(7k + 9)cm
Q25)	¾ x $\frac{22}{7} = \frac{66}{28}$ $= \frac{33}{14}$ $\frac{33}{14}$ x $\frac{14}{1} = \frac{33}{1}$ = 33 33 + 7 + 7 = 47
Q26)	8 : 14 : 5
Q27)	True Not possible to tell
Q28)	75 + 75 = 150 180 – 150 = 30 45 – 30 = 15°
Q29)	32 – 6 = 26 26 – 6 = 20 20 x 4 = 80 cm
Q30)	$\frac{11}{12} \div \frac{1}{6} = \frac{11}{12}$ x $\frac{6}{1} = \frac{11}{2}$ = 5½ ½ x $\frac{1}{6} = \frac{1}{12}$ m

PAPER 2

Q1)	3520 ÷ 2 = 1760 1760 – 1056 = 704 $\frac{704}{3520} = \frac{1}{5} = \frac{20}{100}$ = 20%
Q2)	21.4 – 1.8 = 19.6 2.06 x 8 = 16.48 19.6 – 16.48 = 3.12 3.12 ÷ 6 = 0.52kg

Q3)	360° – 60° – 60° – 60° = 180° 180° ÷ 2 = 90° 180° – 90° = 90° 90° ÷ 2 = 45° 45° + 60° = 105°
Q4)	½ x 12 x 17 = 102 102 + 102 = 204 204 – 130 = 74 74 ÷ 2 = 37cm²
Q5)	180° – 80° = 100° 100° ÷ 2 = 50° 50° ÷ 2 = 25° 180° – 80° – 25° = 75°
Q6)	a)  b)45°
Q7)	675 – 450 = 225 225 ÷ 3 = 75 225 + 675 = 900 a)Thomson and Bishan b)750
Q8)	16 + 16 = 32 32 x 32 = 1024 3.14 x 16 x 16 = 803.84 1024 – 803.84 = 220.16 cm²
Q9)	11.2 x 3 = 33.6 510.3 – 33.6 =476.7 476.7 ÷ 2 = 238.35 238.35 ÷ 3 = 79.45 km/h

Q10)	a)2980 – 464 = 2516 2516 ÷ 2 = 1258 85% x 1480 = 1258 100 – 85 = 15% b)2980 – 1258 = 1722 80% →$1722 100% →$2152.50
Q11)	B : G 4u : 5u -170 : 1u (20%x 5u) (2u)1p: 2p(4u)→6u (whole thing) 1p = 4u – 170 2p = 8u – 340 4u = 8u – 340 1u = 85 6u = 510
Q12)	0.6 x 20 = 12 12 + 4.5 = 16.5 16.5 x 9 = 148.5 148.5 + 0.6 + 0.6 + 0.6 = 150.3 20 x 9 = 180 180 + 3 = 183 a)$16.50 b)183
Q13)	60 x 30 x 34 = 61200 2 x 30 x 34 = 2040 31 x 29 x 30 = 26970 60 x 30 = 1800 26970 ÷ 1800 ≈ 15.0 cm
Q14)	180 – 103 = 77 180 – 103 – 45 = 32 90 – 32 = 58 180 – 58 – 58 = 64 90 – 64 = 26°

Q15)	 12u→ 144 3u→36
Q16)	a)5 + 2 = 7 5 + 5 + 7 = 17 b)50 + 2 = 52 50 + 50 + 52 = 152 c)269 – 2 = 267 267 ÷ 3 = 89 (figure 89)
Q17)	a)$\frac{3}{7}$ x 273 = $117 b)273 + 273 + 117 + 117 + 117 = 897 17043 ÷ 897 = 19 19 x 3 = 57