HENRY PARK PRIMARY SCHOOL
2019 SA1
MATHEMATICS
PRIMARY 6

PAPER 1
(BOOKLET A)

Name: _____ ( )

Parent's Signature

Class: Primary 6_____ / 6M_____

_____

Marks:

Paper 1	Booklet A	20
	Booklet B	25
Paper 2		55
Total		100

Total Time for Booklets A and B: 1 hour

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

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) and shade your answer on the Optical Answer Sheet.
(20 marks)

---

1 What is the value of $10 \div 400$?

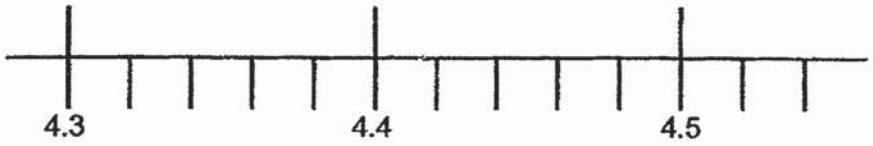
(1) 0.25
(2) 0.025
(3) 40
(4) 4

2 Arrange the following fractions from the smallest to the greatest

	smallest		greatest
(1)	$\frac{6}{5}$,	$\frac{7}{6}$,	$1\frac{1}{4}$
(2)	$\frac{7}{6}$,	$\frac{6}{5}$,	$1\frac{1}{4}$
(3)	$\frac{7}{6}$,	$1\frac{1}{4}$,	$\frac{6}{5}$
(4)	$1\frac{1}{4}$,	$\frac{7}{6}$,	$\frac{6}{5}$

(Go on to the next page)

3 In the scale below, what is the value of the reading at X?



(1) 4.52
(2) 4.54
(3) 4.7
(4) 4.9

4 Find the value of $14 - 2 \times 4 + 20 \div 4$

(1) 11
(2) 17
(3) 53
(4) 72

5 There is a total of 60 red and green beans in a container. 36 of them are red beans. What is the ratio of the number of green beads to the number of red beads in the container?

(1) 2 : 3
(2) 2 : 5
(3) 3 : 2
(4) 3 : 5

(Go on to the next page)

6 The opening hours of Siti's Cafe are shown below.

How long is the cafe open each day?

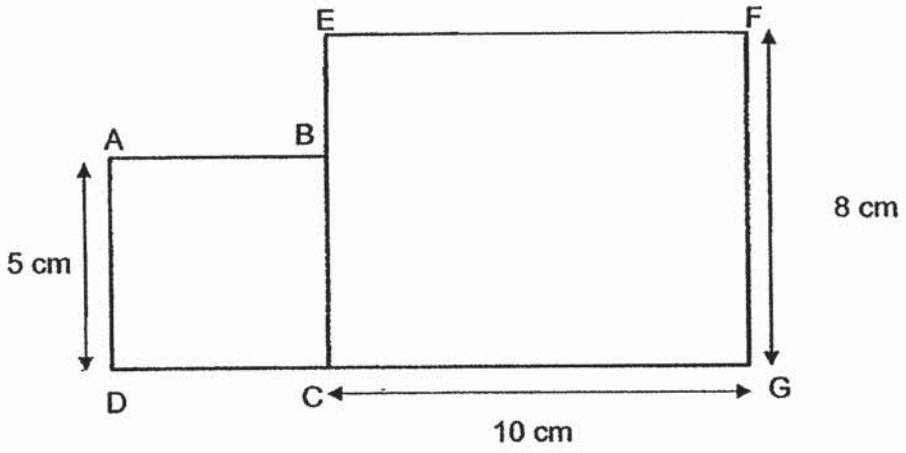
Siti's Cafe
Opening Hours

9 a.m. to 2.00 p.m.
5.45 p.m. to 10.00 p.m.

(1) 8 h 15 min
(2) 8 h 45 min
(3) 9 h 15 min
(4) 9 h 45 min

7 The figure below is made up of square ABCD and rectangle EFGC.

What is the perimeter of the figure?



(1) 43 cm
(2) 46 cm
(3) 51 cm
(4) 105 cm

(Go on to the next page)

8 A solid cuboid of height 7 cm has a square base of side 5 cm. What is its volume?

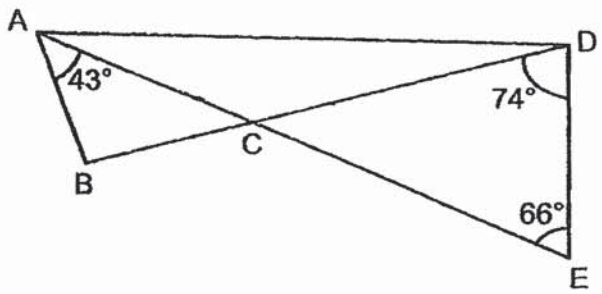
(1) 25 cm^3

(2) 35 cm^3

(3) 175 cm^3

(4) 245 cm^3

9 In the figure, ACE and BCD are straight lines. Find $\angle ABC$.



(1) 40°

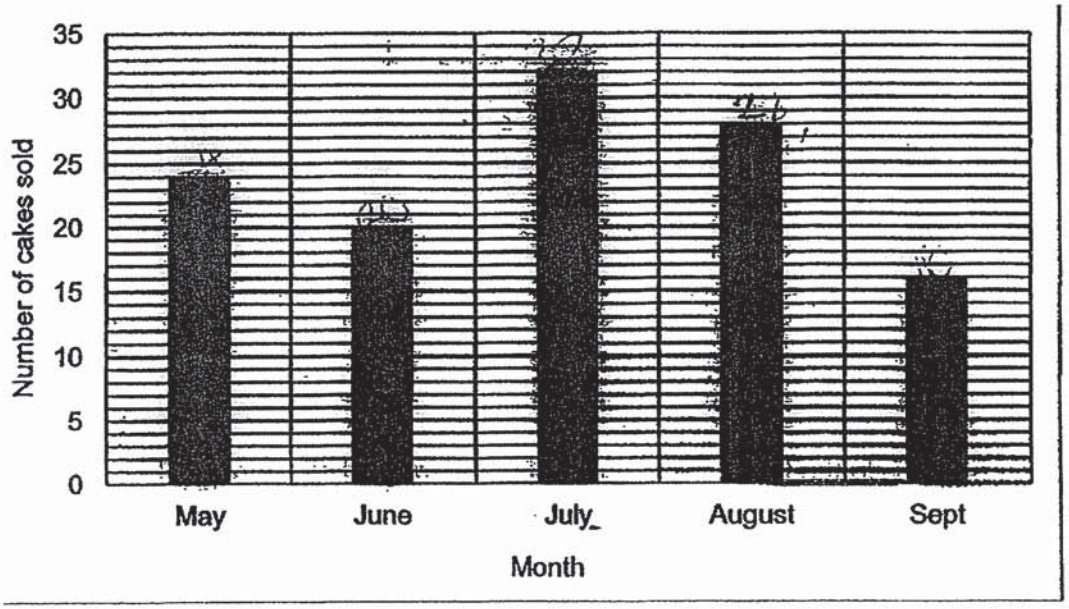
(2) 74°

(3) 94°

(4) 97°

(Go on to the next page)

10 The graph below shows the number of cakes sold in each month from May to September.



What is the average number of cakes sold in each month from May to September?

(1) 16

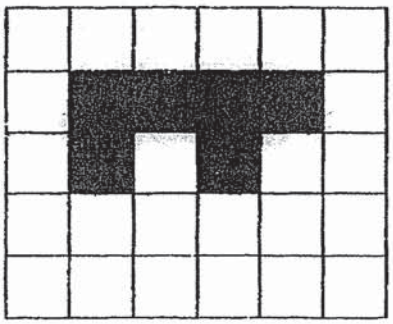
(2) 20

(3) 24

(4) 40

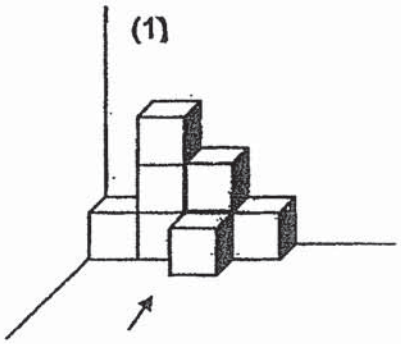
(Go on to the next page)

11 The top view of a solid is drawn in a square grid.

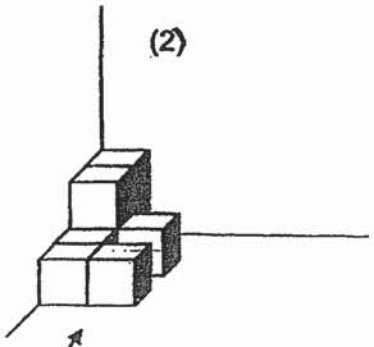


Which of the following is the solid with the top view drawn above?

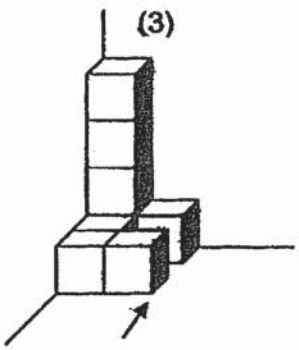
(1)



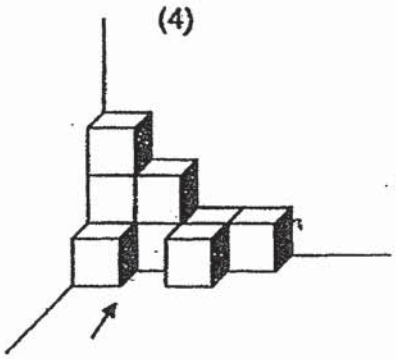
(2)



(3)



(4)



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12 Janelle used stickers of four different shapes to make a pattern. The first 15 stickers are shown below. What was the shape of the 100th sticker?

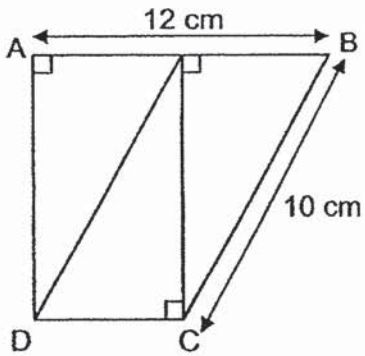
(1) ☺

(2) 🏛

(3) ✡

(4) ♡

13 Dave has three identical right-angled triangles. He joined them to form the figure ABCD shown below. The area of figure ABCD is 72 cm^2.
AB = 12 cm and BC is 10 cm. Find the perimeter of the figure ABCD.



(1) 34 cm

(2) 36 cm

(3) 38 cm

(4) 40 cm

(Go on to the next page)

14 In a chess competition, a player has to play three games in Round 1. If the average score in Round 1 is at least 35, the player will be able to move on to Round 2.

The table below shows Lydia's scores for the two games she played in Round 1.

Round 1	
Game	**Score**
1st	32
2nd	28
3rd	?

What is the lowest score she must get in the 3rd game of Round 1 in order to move on to Round 2?

(1) 34
(2) 45
(3) 60
(4) 70

(Go on to the next page)

15 Isaac used $\frac{3}{5}$ of his money to buy 6 spring rolls and 8 chicken wings.

The cost of 3 spring rolls was the same as the cost of 2 chicken wings.

What is the most number of such spring rolls he could buy with $\frac{1}{4}$ of his remaining money?

(1) 8
(2) 2
(3) 3
(4) 12

(Go on to Booklet B)

HENRY PARK PRIMARY SCHOOL
2019 SA1
MATHEMATICS
PRIMARY 6

PAPER 1
(BOOKLET B)

Name: _____ ( )

Class: Primary 6_____ / 6M_____

25

Total Time for Booklets A and B: 1 hour

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.

You are **not** allowed to use a calculator.

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 Express 8.08 as a mixed number in the simplest form.

Ans: _____

17 Use all the digits 1, 8, 4 and 5 to form the whole number closest to 5000.

Ans: _____

(Go on to the next page)

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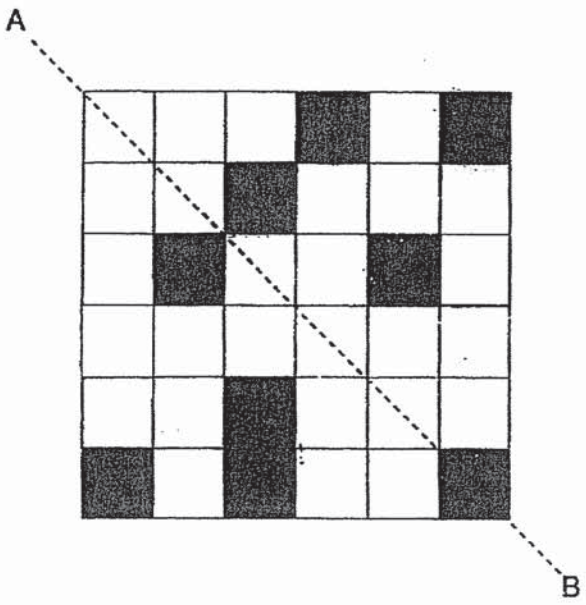
18 The figure below shows some shaded squares. Shade 2 more squares to form a symmetric figure with AB as the line of symmetry.



19 Helen played on her piano from 11.45 a.m to 1.25 p.m. How long did she play on her piano? Give your answer in minutes.

Ans: _____ min

(Go on to the next page)

20 The shaded figure is a semicircle of diameter 20 cm. What is the area of the shaded figure? (Take $\pi = 3.14$)

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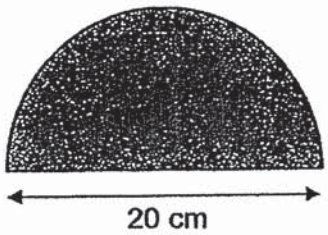


Ans: _____ cm^2

(Go on to the next page)

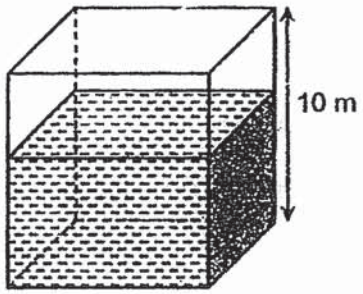
Questions 21 to 30 carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(20 marks)

Do not write in this space

21 The figure shows a cubical tank which is $\frac{3}{5}$-filled with water.

What is the volume of water needed to fill up the tank to the brim?



Ans: _____ m^3

22 Jerome had 51 stickers and Cayden had 37 stickers.

After both boys used the same number of stickers. the number of stickers Jerome and Cayden had were in the ratio 5 : 3.

How many stickers did Cayden have in the end?

Ans: _____

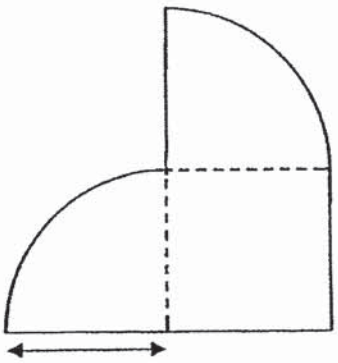
(Go on to the next page)

Do not write in this space

23 Rebecca had 4 times as many apples as pears at first. She gave away 16 apples and bought 15 pears. In the end, she had 8 more apples than pears. How many pears did she have at first?

Ans: _____

24 The figure below is made up of a square and two quarter circles. Find the perimeter of the figure. (Take $\pi = \frac{22}{7}$)



Ans: _____ cm

(Go on to the next page)

Do not write in this space

25 David, Leon and Felix had some stickers. After David gave $\frac{3}{8}$ of his stickers to Leon and $\frac{3}{10}$ of his remaining stickers to Felix, all three boys had the same number of stickers in the end. What was the ratio of the number of stickers Leon had at first to the number of stickers Felix had at first?

Ans: _____

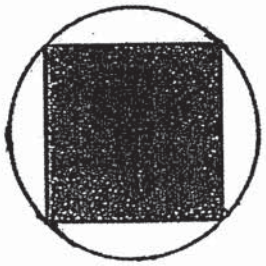
26 A piece of rope measuring 10.7 m in length was cut into three pieces. The first piece was 1.2 m longer than the second piece. The first piece was three times as long as the third piece. What was the length of the shortest piece in metres?

Ans: _____ m

(Go on to the next page)

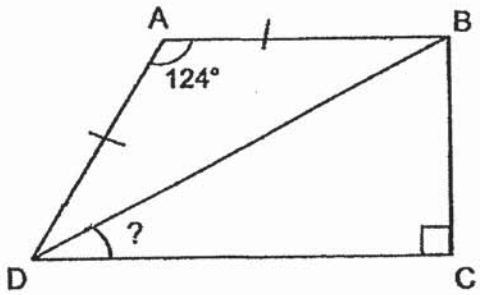
27 The diameter of the circle shown below is 16 cm. Find the area of the shaded square.

Do not write in this space



Ans: _____ cm^2

28 ABCD is a trapezium. AD = AB and ∠DAB = 124°. Find ∠BDC.



Ans: _____ °

(Go on to the next page)

Do not write in this space

29 An Xin baked a cake and gave $\frac{1}{5}$ of it to her friend. She cut the remaining cake equally into 12 slices. What fraction of the whole cake was each slice? Express your answer in the simplest form.

Ans: _____

30 A publisher sold 1000 magazines in March. The number of magazines sold in April was a 20% increase from what was sold in March. The number of magazines sold in May was a 30% decrease from what was sold in April. How many magazines did the publisher sell in May?

Ans: _____

End of Paper 1

HENRY PARK PRIMARY SCHOOL
2019 SA1
MATHEMATICS
PRIMARY 6

PAPER 2

Name: _____ ( )

Class: Primary 6_____ / 6M_____

55

Time for Paper 2: 1 h 30 min

Do not turn over this page until you are told to do so.

Follow all instructions carefully.

Answer all questions.

Show your working clearly as marks are awarded for correct working.

Write your answers in this booklet.

You are allowed to use a calculator.

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

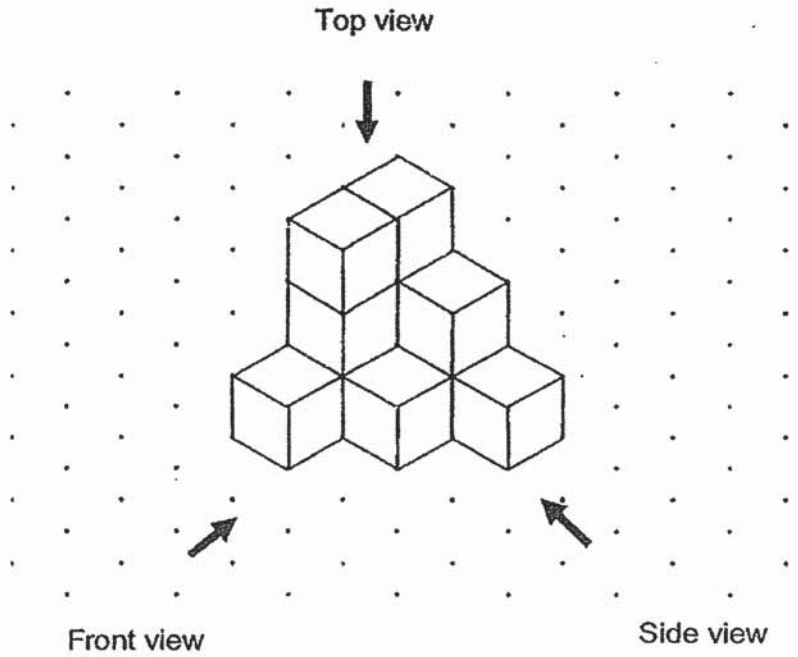
1 Dylan has a number of red green and blue balloons $\frac{5}{12}$ of the balloons are red. There are twice as many red balloons as green balloons. What fraction of the balloons is blue? Express your answer in the simplest form.

Ans:_____

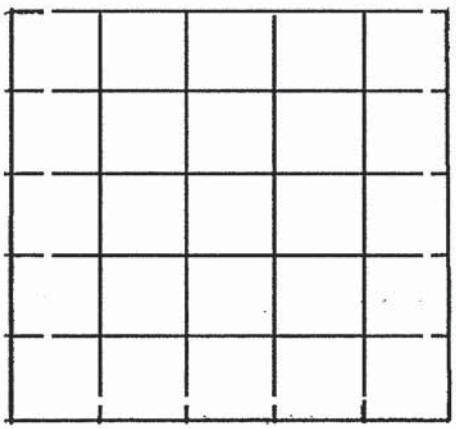
(Go on to the next page)

2 The solid below was made up of 11 unit cubes.

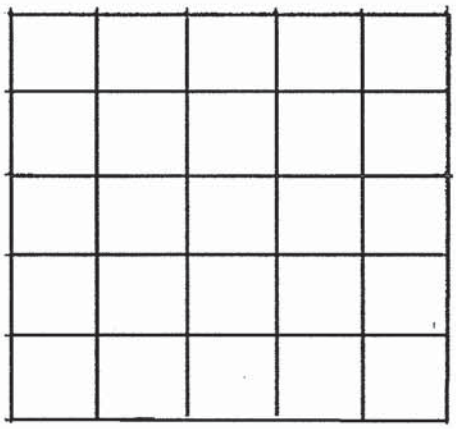
Do not write in this space



Draw the front view and the side view of the solid in the square grids below.



Front view



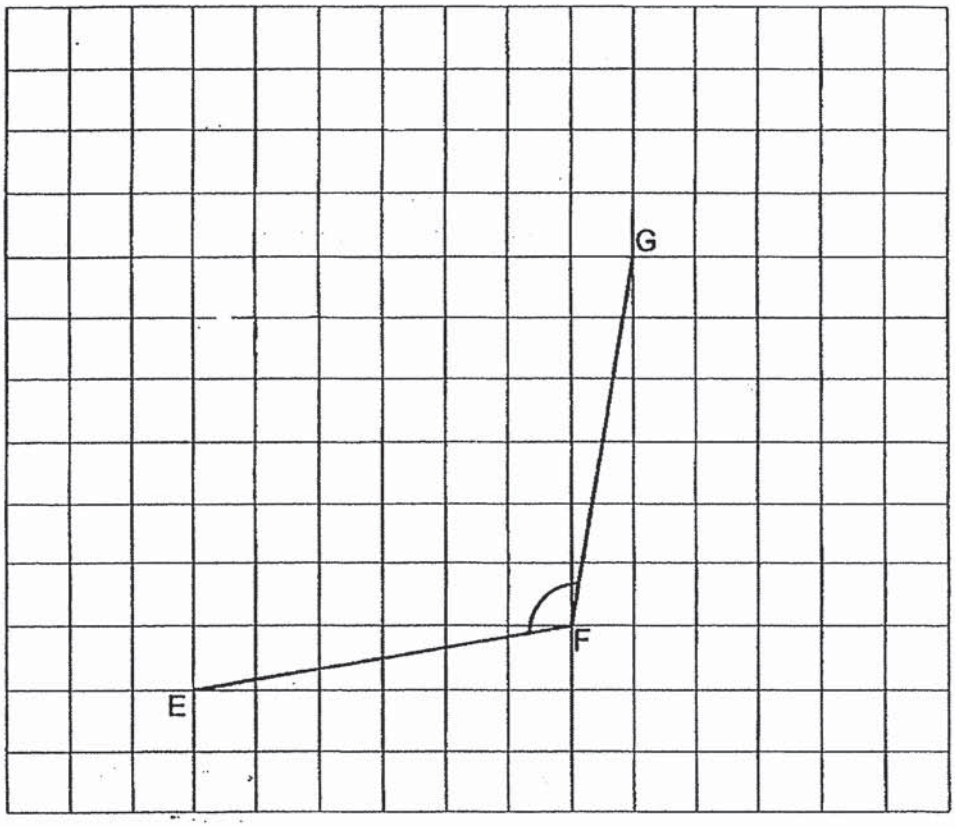
Side view

(Go on to the next page)

3 In the square grid below, EF and FG are straight lines.

(a) Measure and write down the size of ∠EFG.

(b) EF and FG form two sides of a rhombus EFGH.
Complete the drawing of rhombus EFGH in the square grid.



Do not write in this space

Ans : (a) _____ °

(Go on to the next page)

4 A number of students took part in a race. The table shows the number of students with the time taken to complete the race.

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Time taken to complete the race	Number of students
More than 14 seconds	4
13.1 to 13.9 seconds	9
12.3 to 13 seconds	12
11.6 to 12.2 seconds	8
11 to 11.5 seconds	5
Less than 11 seconds	2

Prizes were given to $\frac{3}{8}$ of the students who completed the race faster than the rest. Ann was one of the prize winners. What was the longest time she could have taken to complete the race?

Ans: _____ seconds

5 At first, Jareth had 80 marbles and some erasers. After he gave away 12 marbles and 25% of his erasers, he had a total of 128 marbles and erasers left. How many erasers did Jareth give away?

Ans: _____

(Go on to the next page)

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 brackets [ ] at the end of each question and part-question.

(45 marks)

Do not write in this space

6 Christopher had \$96 more than Hong Wei at first. Hong Wei then gave Christopher \$36. In the end, Christopher had 4 times as much money as Hong Wei. How much money did Christopher have at first?

Ans: _____ [3]

(Go on to the next page)

7 60% of the Chess Club members are girls. $\frac{4}{5}$ of the girls and $\frac{3}{4}$ of the boys wear spectacles. What percentage of the Chess Club members wear spectacles?

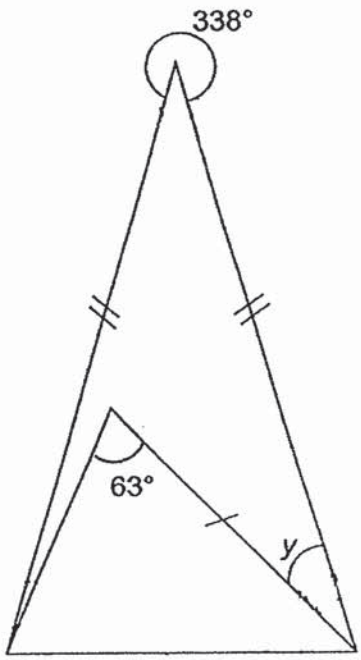
Do not write in this space

Ans: _____ [3]

(Go on to the next page)

8 The figure below is made up of two isosceles triangles. Find $\angle y$

Do not write in this space

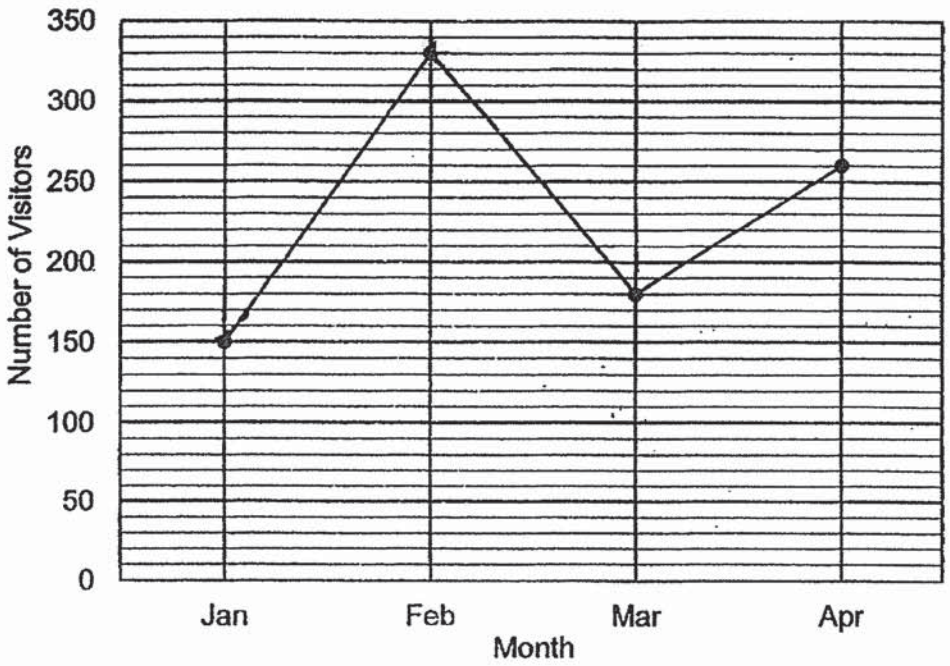


Ans: _____ [3]

(Go on to the next page)

9 The graph below shows the number of visitors at a museum from January to April.

Do not write in this space



(a) How many more visitors went to the museum in February than in March?

(b) What was the percentage increase in the number of visitors at the museum in April compared to January?(Round your answer to one decimal place)

Ans: (a)_____[1]

(b)_____[2]

(Go on to the next page)

10 Jiajia had $(19a + 3)$ stamps. Kathy had $8a$ fewer stamps than Jiajia. Bernice had $(3a - 2)$ more stamps than Kathy Given that the three girls had a total of 1151 stamps, how many stamps did Jia Jia have?

Do not write in this space

Ans: _____ [4]

(Go on to the next page)

11 Eydin has two strips of stickers, A and B, of equal length. The length of each sticker is 1.2 cm. The stickers in each strip form a repeated pattern as shown below.

Do not write in this space

Strip A 

Strip B 

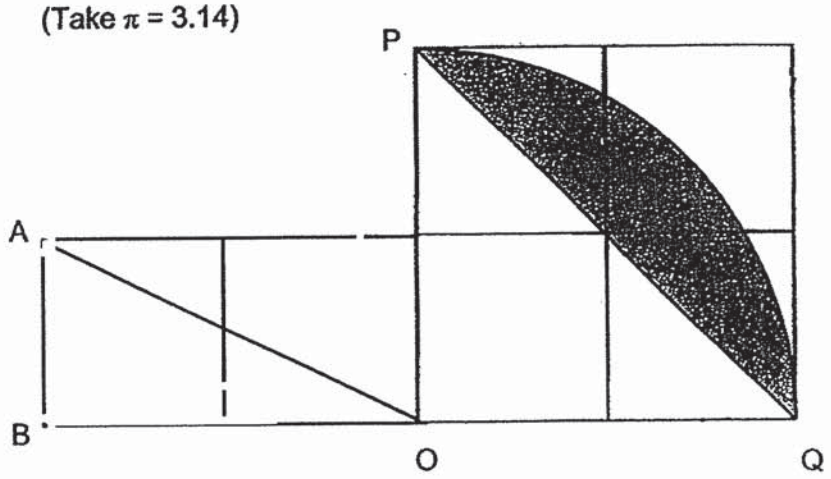
There are 56 heart stickers ( ) altogether in both strips of stickers.
What is the length of each strip of stickers?

Ans: _____ [3]

(Go on to the next page)

12 The figure shows 6 identical squares. The area of each square is 169 cm^2. The outline of the shaded parts of the figure is formed by a quarter circle and straight lines. Find the area of the shaded parts.

(Take $\pi = 3.14$)



Do not write in this space

Ans: _____ [3]

(Go on to the next page)

13 Kenji wants to buy a bicycle. The table shows the prices of the bicycle from two different shops.

Do not write in this space

Shop A		Shop B	
Original Price	**% Discount**	**Original Price**	**% Discount**
$ 1040	30%	$1175	35%

(a) What is the difference in the discounted price between the two shops?

(b) GST is 7% of the discounted price of the bicycle. How much does Kenji have to pay for the bicycle in Shop A including GST?

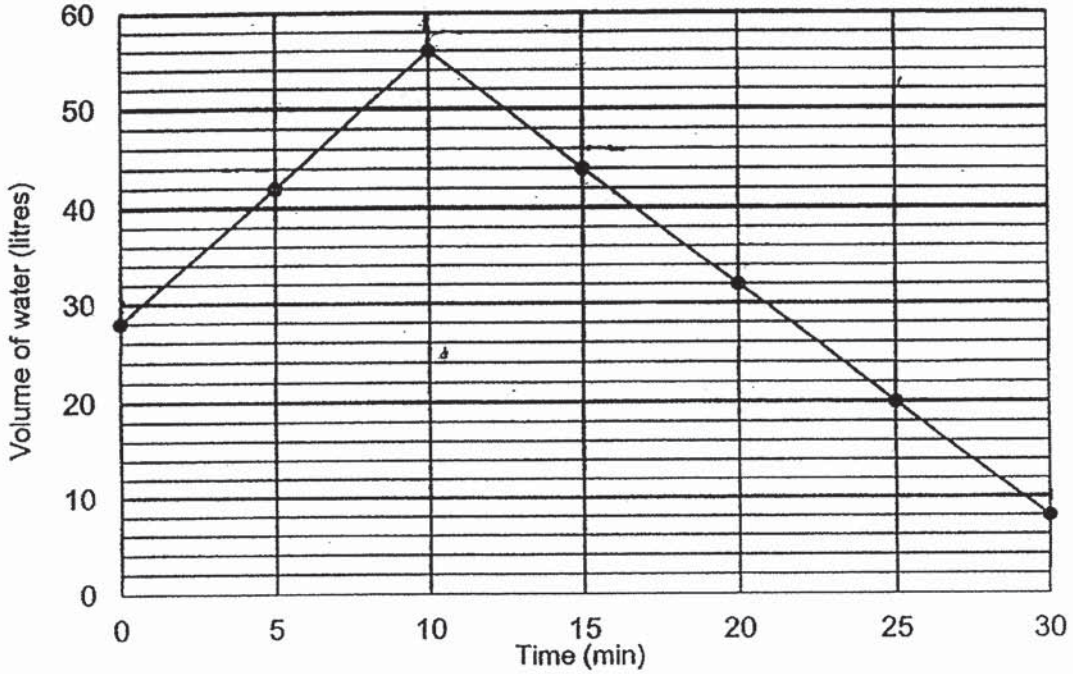
Ans: (a) _____ [2]

(b) _____ [2]

(Go on to the next page)

14 A rectangular tank, with a capacity of 60 litres, was partly filled with water at first. Tap A was turned on to add more water into the tank. After 10 minutes, Tap A was turned off and Tap B was turned on to drain water out of the tank until the 30th minute. The line graph shows the volume of water in the tank over the period of 30 minutes.

Do not write in this space



(a) How many litres of water flowed into the tank in 1 min when Tap A was turned on?

Ans: _____ [2]

(b) 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. [2]

Statement	True	False	Not possible to tell
At the 15th minute, there was 45 litres of water in the tank.			
From the 10th minute until the 30th minute, water was draining at 2.4 litres per minute.			
If both Tap A and Tap B were turned on at the 30th minute, the volume of water in the tank will remain the same.			

(Go on to the next page)

15 Marika baked a total of 945 chocolate and vanilla buns. After selling an equal number of both types of buns, she had $\frac{1}{3}$ of the chocolate buns and $\frac{1}{6}$ of the vanilla buns left. She packed the remaining chocolate buns into 23 boxes. Some boxes contained 5 chocolate buns while the rest contained 9 chocolate buns.

(a) How many chocolate buns were packed into the 23 boxes?

(b) How many boxes contained 9 chocolate buns?

Do not write in this space

Ans: (a) _____ [3]

(b) _____ [2]

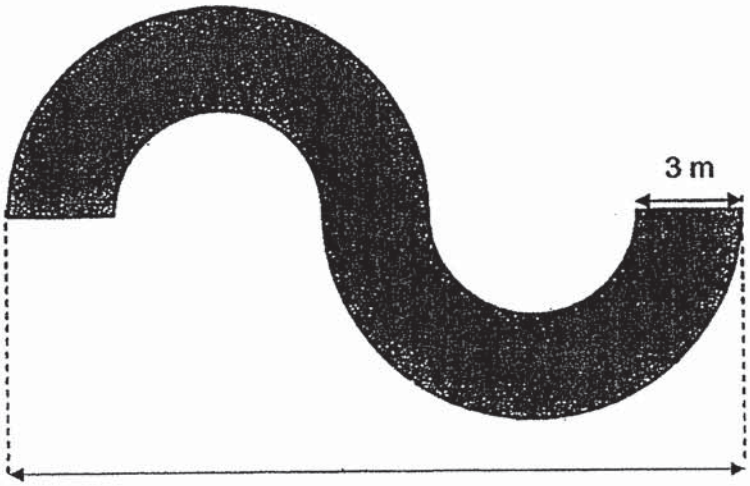
(Go on to the next page)

16 The figure below shows a 3 m wide flower garden. The outline of the flower garden is formed using 2 identical large semicircles, 2 identical small semicircles and 2 straight lines.

(a) Find the perimeter of the flower garden.

(b) Find the area of the flower garden.

(Take $\pi = 3.14$)



Do not write in this space

Ans: (a) _____ [3]

(b) _____ [2]

(Go on to the next page

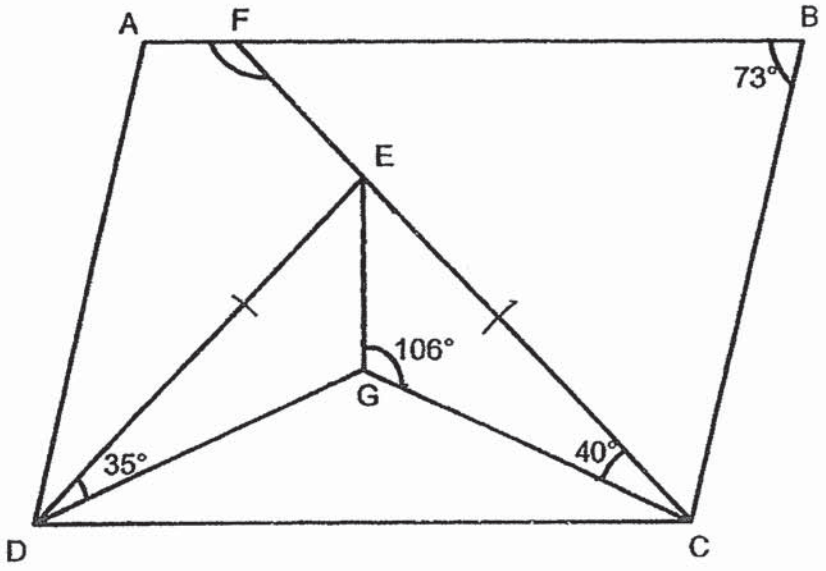
17 In the figure, ABCD is a parallelogram. Triangles DEG, ECG and DGC make up the equilateral triangle DEC. $\angle EDG = 35°$, $\angle ECG = 40°$ and $\angle EGC = 106°$.

FEC is a straight line and $\angle ABC = 73°$

(a) Find $\angle AFE$

(b) Find $\angle DGE$

Do not write in this space



Ans: (a)_____ [2]

(b)_____ [3]

End of Paper 2

Setters: Mrs Elaine Chua, Mr Jenfry Tseng, Mrs Ling Lee Ching

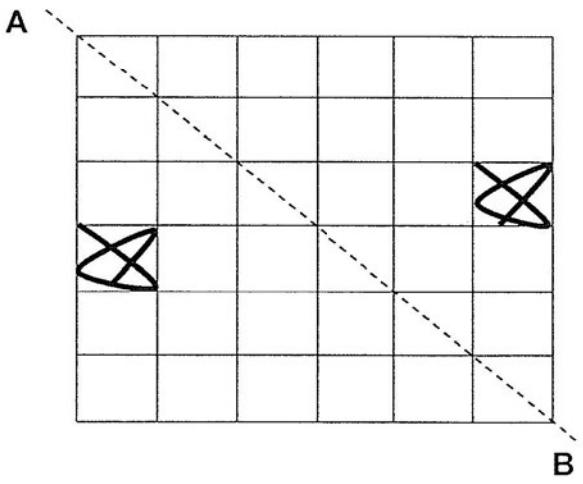
SCHOOL : HENRY PARK PRIMARY SCHOOL
LEVEL : PRIMARY 6
SUBJECT : MATH
TERM : 2019 SA1

PAPER 1 BOOKLET A

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

Q 11	Q12	Q13	Q14	Q15
4	1	2	2	3

PAPER 1 BOOKLET B

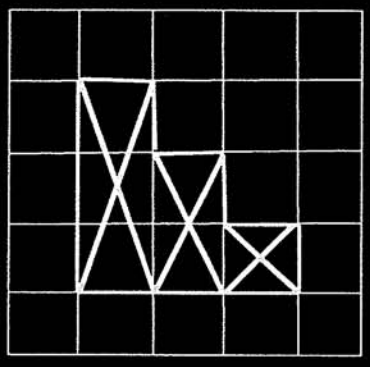
Q16)	$8\frac{2}{25}$
Q17)	5148
Q18)	
Q19)	11.45am to 1.25pm = 1h 40min = 100 min
Q20)	$\frac{1}{2} \times 3.14 \times 10^2 = \frac{1}{2} \times 3.14 \times 100$ $= 31.4 \times 5 = 157\text{cm}^2$
Q21)	10m x 10m x 10m = 1000m³ $\frac{2}{5}$ x 1000m³ = 400m³

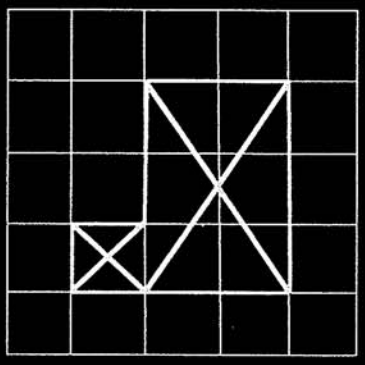
Q22)	21
Q23)	16 + 15 + 8 = 39 39 ÷ 3 = 13pears
Q24)	½ x $\frac{22}{7}$ x 56 = 88 28 x 4 = 112 112 + 88 = 200 cm
Q25)	1 : 4
Q26)	10.7 – 1.6m = 9.1m 9.1m ÷ $\frac{7}{3} = 9.1 \times \frac{3}{7} = 3.9$ $\frac{1}{3}$ x 3.9 = 1.3 1.3 + 0.4 = 1.7 m
Q27)	2 x ½ x 16 x 8 = 128 cm²
Q28)	180° – 124° = 56° 56° ÷ 2 = 28° 90° – 28° = 62° 180° – 90° – 62° = 28°
Q29)	3 x 5 = 15 = $\frac{1}{15}$
Q30)	March→1000 April→$\frac{120}{100}$ x 1000 = 1200 May →$\frac{70}{100}$ x 1200 = 840magazines

PAPER 2

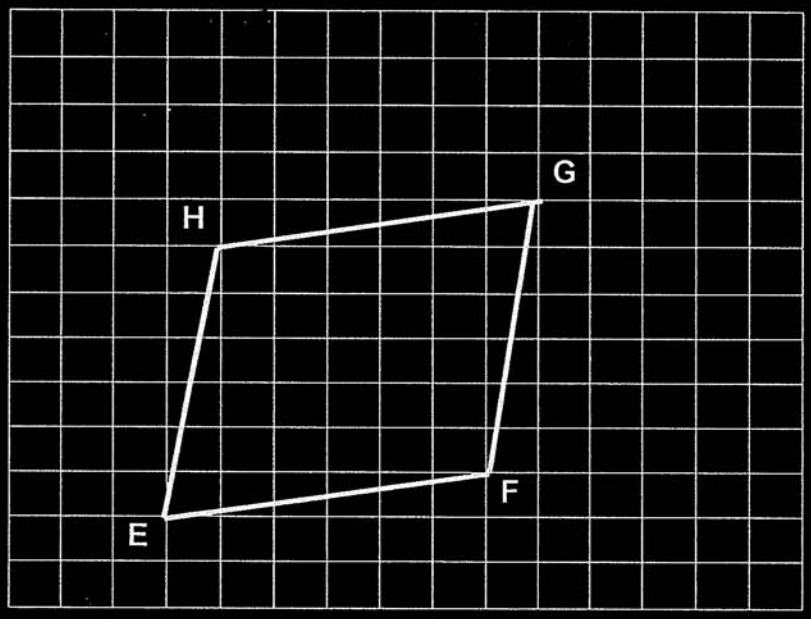
Q1)	24u – 15u = 9u $\frac{9}{24} = \frac{3}{8}$

Q2)





Q3) a)110°



Q4) 4 + 9 + 12 + 8 + 5 + 2 = 40

$\frac{3}{8}$ x 40 = 15

ANS: 12.2

Q5) 68 + ¾ n = 128

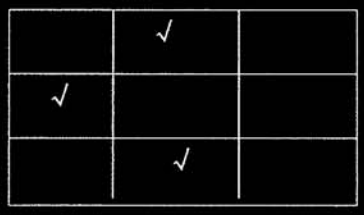
¾ n = 128 – 68 = 60

$n = \frac{60 \times 4}{3}$

= 80

¼ x 80 = 20 erasers

Q6)	U + 132 = 4u – $144 $132 + $144 = 4u – u $276 = 3u U = $276 ÷ 3 = $92 $92 + $96 =$188
Q7)	48% + 30% = 78%
Q8)	360° – 338° = 22° (180° – 22°) ÷ 2 = 79° 180° – 63° – 63° = 54° 79° – 54° - 25°
Q9)	a)330 – 180 = 150 visitors b)260 – 150 = 110 $\frac{110}{150}$ x 100% ≈ 73.3%
Q10)	Jia→19a+3 Kathy→11a+3 B-→14a+1 19a + 11a + 14a + 7 = 1151 44a = 1151 – 7 = 1144 a = $\frac{1144}{44}$ = 26 19a = 26 x 19 = 494 494 + 3 = 497stamp
Q11)	Given that there are 56 Stickers B = 56 ÷ 7 = 8 Length of the strip of stickers = 8x12x1.2=115.2cm
Q12)	Area of triangle = ½ x 26 x 26 = 338 Area of quarter circle = ¼ x 3.14 x 26 = 530.66 Area of square = 26 x 26 = 676 Area of A = 676 – 530.66 = 145.34 Area of B = 676 – 338 – 145.34 = 192.66 Area of C = ½ x 26 x 13 = 169 192.66 + 169 = 361.66cm²
Q13)	a)Shop A→$\frac{70}{100}$ x 1040 = 728 Shop B→$\frac{65}{100}$ x 1175 = 763.75 763.75 – 728 = $35.75

	b) $\frac{107}{100}$ x 728 = $778.96
Q14)	a)56 – 28 = 28 $\frac{28}{10}$ = 2.8L b) 
Q15)	a)7.5p + 6p = 13.5p 13.5p = 945 P = $\frac{945}{13.5}$ = 70 70 x 2.5 = 175 b)23 x 5 = 115 175 – 115 = 60 $\frac{60}{4}$ = 15 (9 boxes) 23 – 15 = 8 (3 boxes) ANS : 15 boxes
Q16)	a)28 – 3 – 3 – 3 = 19 19 ÷ 2 = 9.5 3.14 x 9.5 = 29.83 29.83 + 48.67 + 3 + 3 = 84.5m b)3.14 x 7.75^2 = 188.59625 3.14 x 4.75^2 = 70.84625 188.59625 – 70.84625 = 117.75m^2
Q17)	a)60° – 40° = 20° 180° – 40° – 20° = 120° b)60° – 35° = 25° 180° – 25° – 20° = 135° 360° – 135° – 106° = 119°