HENRY PARK PRIMARY SCHOOL
2020 PRELIMINARY EXAMINATION
MATHEMATICS
PRIMARY 6

PAPER 1
(BOOKLET A)

Name: _____ ( ) Parent's Signature

Class: Primary 6F _____ _____

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 in the Optical Answer Sheet.

(20 marks)

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1 In 31.42, which digit is in the tenths place?

(1) 1

(2) 2

(3) 3

(4) 4

2 Express $1\frac{3}{50}$ as a decimal.

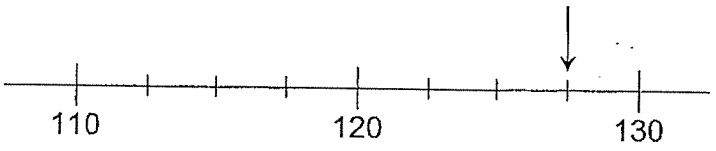
(1) 1.06

(2) 1.3

(3) 1.35

(4) 1.6

3 Which of the following is closest to the number indicated by the arrow in the number line below?



(1) 123

(2) 126

(3) 127

(4) 129

(Go on to the next page)

4 Andre had a number of red apples, green apples and oranges in the ratio 8 : 3 : 2. What is the ratio of the number of oranges to the total number of apples that Andre had?

(1) 2 : 11

(2) 2 : 13

(3) 11 : 2

(4) 13 : 2

5 On a bus, 9 of the passengers were men, 15 of the passengers were women and the rest were children. Given that 20% of the passengers were children, how many passengers were there in total on the bus?

(1) 24

(2) 30

(3) 96

(4) 120

6 A train left Town X for Town Y. The journey took 3 h 50 min. The train arrived at Town Y at 11 05. What time did the train leave Town X?

(1) 07 15

(2) 08 40

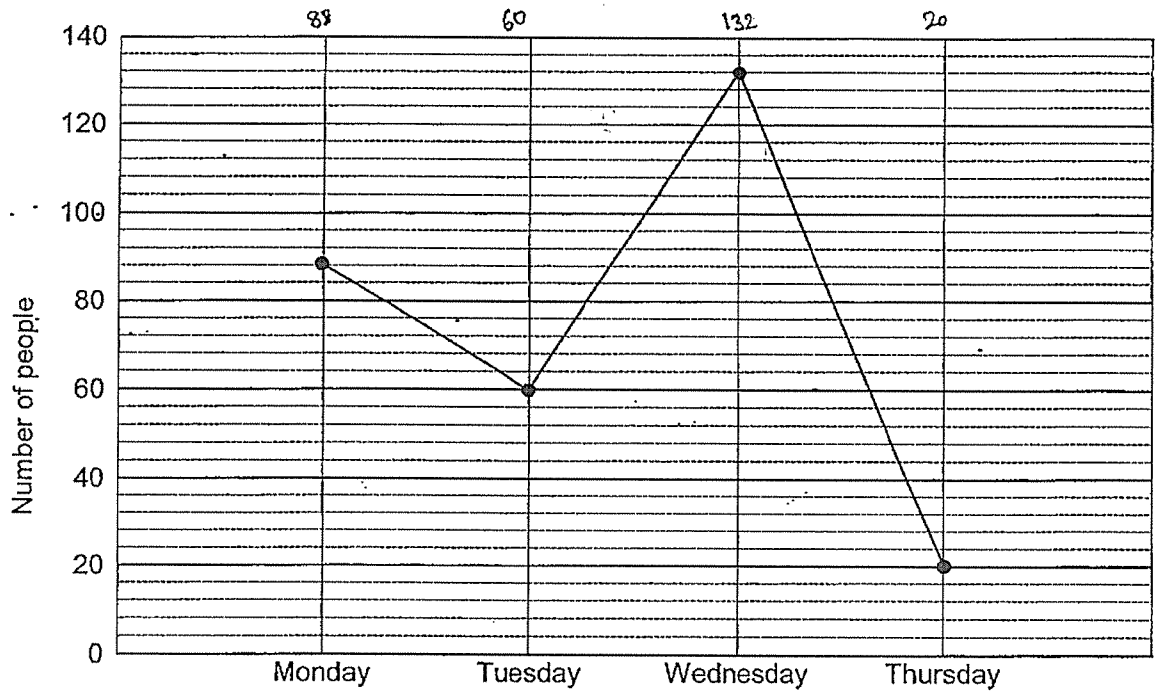
(3) 08 45

(4) 08 55

(Go on to the next page)

Use the information below to answer Questions **7** *and* **8.**

The graph shows the number of people who visited a shop from Monday to Thursday.



7 How many people visited the shop on Monday and Tuesday?

(1) 142

(2) 144

(3) 148

(4) 154

8 Given that a total of 104 adults visited the shop on Wednesday and Thursday, find the ratio of the number of children to the number of adults who visited the shop on these two days.

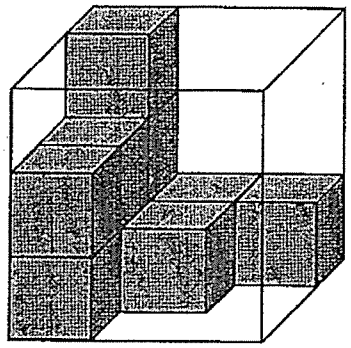
(1) 6 : 13

(2) 6 : 19

(3) 13 : 6

(4) 13 : 19

9 The figure below shows a plastic cubical container partly filled with unit cubes. How many more unit cubes are needed to fill the container completely?



(1) 8

(2) 10

(3) 17

(4) 19

10 Which one the following fractions is larger than $\frac{1}{4}$?

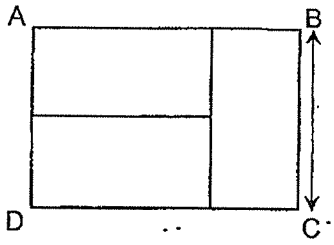
(1) $\frac{6}{24}$

(2) $\frac{5}{21}$

(3) $\frac{4}{15}$

(4) $\frac{3}{13}$

11 In the figure below, ABCD is made up of 3 identical rectangles. The perimeter of ABCD is 60 cm. Find the length of BC.



(1) 6 cm

(2) 12 cm

(3) 18 cm

(4) 20 cm

12 The lengths of two ribbons are in the ratio 5 : 3. The length of one ribbon is 30 cm longer than the other. Find the length of the shorter ribbon.

(1) 18 cm

(2) 45 cm

(3) 50 cm

(4) 75 cm

13 At first, Walter and Ming Ming were facing the same direction. Then, Walter turned 225° anti-clockwise to face South-West and Ming Ming turned 45° clockwise to face South-East. Which direction were Walter and Ming Ming facing at first?

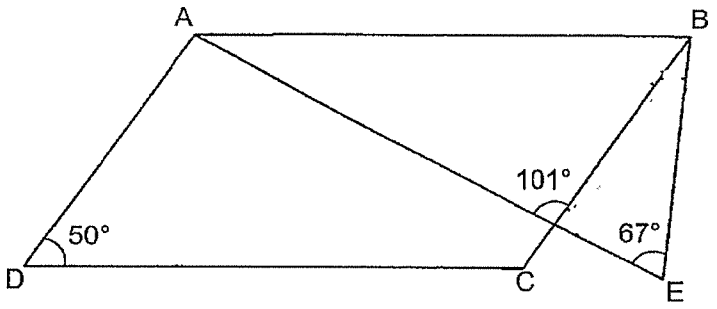
(1) East

(2) North

(3) South

(4) West

14 In the figure below, ABCD is a parallelogram and ABE is a triangle. Find ∠ABE.



(1) 50°

(2) 84°

(3) 90°

(4) 94°

15 The chairs in a hall were arranged in rows. Each row had the same number of chairs. William sat on one of the chairs. There were 5 chairs to his right and 5 chairs to his left. There were 4 rows of chairs in front of him and 8 rows of chairs behind him. How many chairs were there altogether in the hall? [3]

(1) 120

(2) 130

(3) 132

(4) 143

HENRY PARK PRIMARY SCHOOL
2020 PRELIMINARY EXAMINATION
MATHEMATICS
PRIMARY 6

PAPER 1
(BOOKLET B)

Name: _____ ( )

Class: Primary 6 F_____

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.

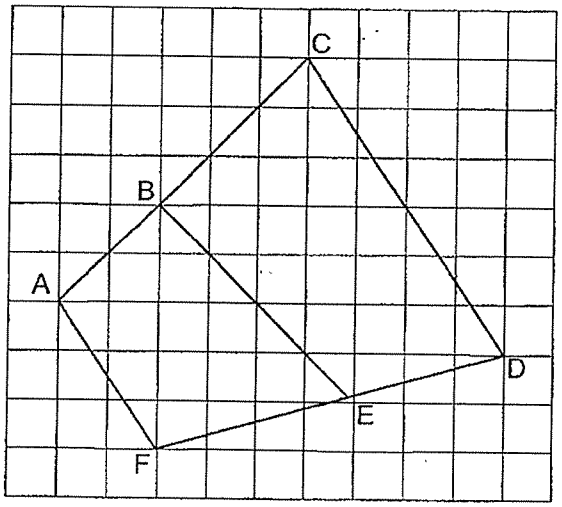
(5 marks)

Do not write in this space

16 Find the value of $\frac{1}{2} \div \frac{1}{10}$

Ans: _____

17 In the figure below, name two lines that are parallel to each other.



Ans: _____ and _____

18 A rectangular tank measures 12 cm by 10 cm by 9 cm. What is the capacity of the tank?

Ans: _____ cm^3

(Go on to the next page)

19 Express 9 minutes as a percentage of 1 hour.

Do not write in this space

Ans: _____ %

20 Find the missing number in the box.

$8 + \boxed{?} \div 2 = 12$

Ans: _____

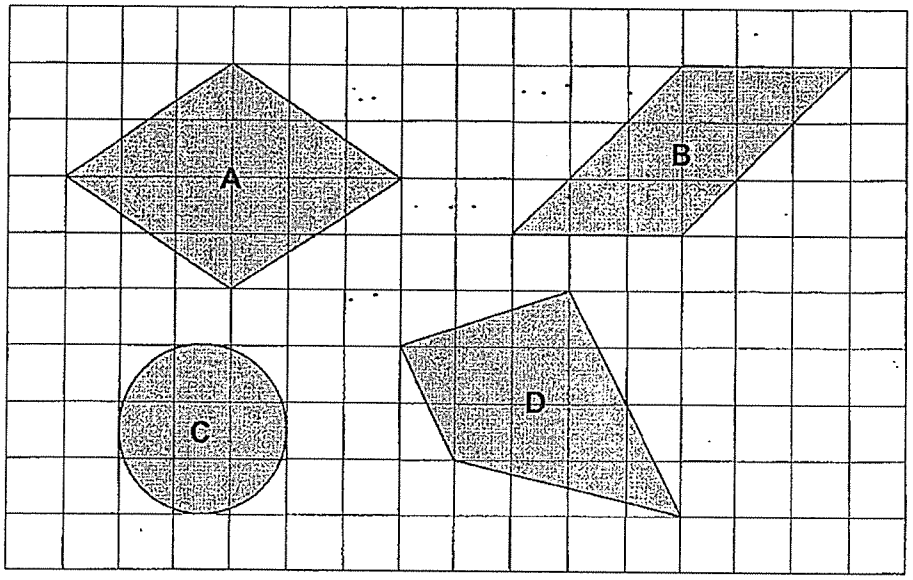
(Go on to the next page)

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.

Do not write in this space

(20 marks)

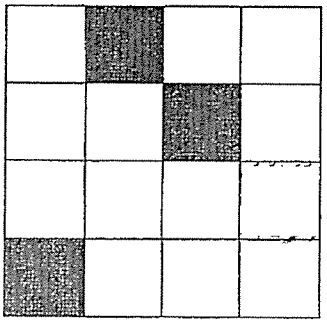
21 **(a)** Four figures, A, B, C and D are drawn on a square grid.



Name all the figures with at least one line of symmetry.

Ans: (a) _____

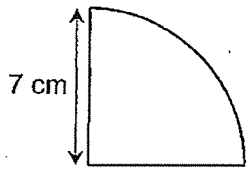
(b) Shade one more square in the figure below to make it symmetrical.



(Go on to the next page)

22 The figure below shows a quarter circle of radius 7 cm. Find the perimeter of the figure. (Take $\pi = \frac{22}{7}$)

Do not write in this space



Ans: _____ cm

23 Mrs Tan deposits $4000 in XYZ Bank for one year at the interest rate of 1.4% per year. How much interest will she get at the end of one year?

Ans: $_____

(Go on to the next page)

24 Ellie had $\$(y + 7)$. Flora had \$4 less than Ellie.
Gloria had $\$2y$ more than Flora.

Do not write in this space

(a) Find the total amount of money the three girls had in terms of y. Express your answer in the simplest form.

(b) Given that the three girls had a total of \$33, find the value of y.

Ans: (a) _____

(b) _____

25 Ace, Ben and Charlie have some marbles. The number of marbles that Ace and Ben have is in the ratio 4 : 5. The total number of marbles Ace and Ben have is three times the number of marbles Charlie has. Given that Ace and Charlie have 350 marbles, how many more marbles does Ben have than Ace?

Ans: _____

(Go on to the next page)

26 There are 40 pupils in class 6J. The table below shows the number of points each pupil in the class scored in the first round of a game.

Do not write in this space

Points scored	0	1	2	3	4	5
Number of pupils	3	6	7	8	10	6

(a) How many pupils in class 6J scored at least 3 points?

(b) Pupils who did not score enough points in the first round could not take part in the second round. 16 pupils could not take part in the second round. What was the least number of points a pupil must have scored in order to take part in the second round?

Ans: (a) _____

(b) _____

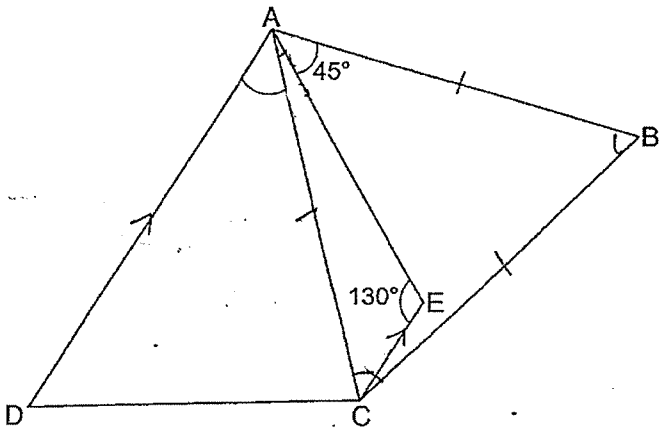
27 A piece of wire is bent to form a rectangle of area 162 cm^2. The length of the rectangle is twice its breadth. Find the breadth of the rectangle.

Ans: _____ cm

(Go on to the next page)

28 In the figure below, ABC is an equilateral triangle and AECD is a trapezium where AD // CE. Find ∠DAC.

Do not write in this space



Ans: _____ °

29 At first, Kate placed all her beads into 30 boxes with an equal number of beads in each box. 6 of the boxes were broken and the beads in these broken boxes were then placed into the remaining 24 boxes. As a result, the number of beads in each remaining box increased by 10. What was the number of beads in each box at first?

Ans: _____

4

30 In the figure, ABC and ADE are right-angled isosceles triangles. BD = CE = 2 cm. The area of the shaded part is 18 cm^2. Find the length of AB.

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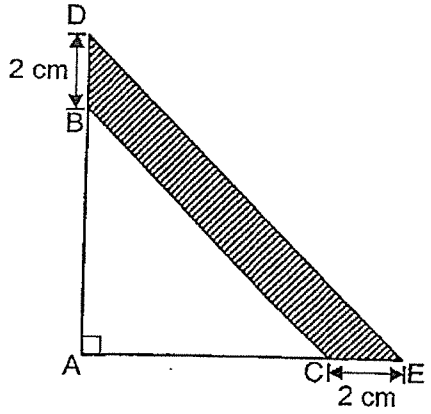


Ans: _____ cm

HENRY PARK PRIMARY SCHOOL
2020 PRELIMINARY EXAMINATION
MATHEMATICS
PRIMARY 6

PAPER 2

Parent's Signature

_____

Name: _____ ( )

Class: Primary 6 F_____

55

Time for Paper 2: 1 hour 30 minutes

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 Jane had some money. She spent \$15 and gave Lisa \$10. In the end, both Jane and Lisa had the same amount of money. How much more money did Jane have than Lisa at first?

Ans: \$_____

2 Mr Aziz had some apples. He sold $\frac{1}{5}$ of the apples on Monday and 80 apples on Tuesday. In the end, he was left with 30% of the apples he had at first. How many apples did he have in the end?

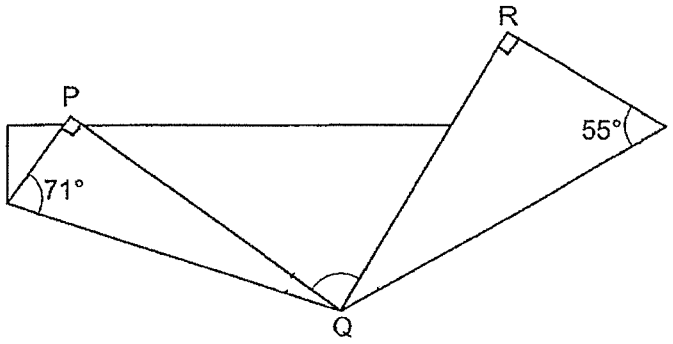
Ans: _____

3 Printer A can print 300 pages in 12 minutes while Printer B can print 300 pages in 10 minutes. If both printers are used at the same time, how many pages can they print in $\frac{1}{2}$ h?

Do not write in this space

Ans: _____

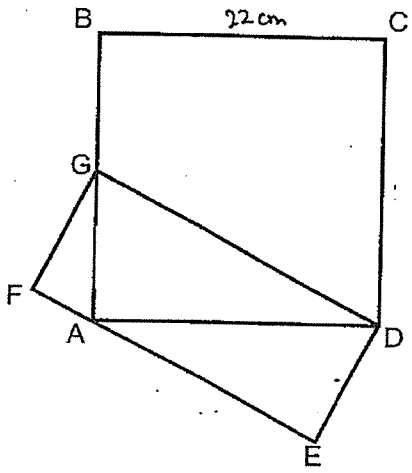
4 A rectangular piece of paper is folded at two of its corners, P and R, as shown. Find ∠PQR.



Ans: _____ °

5 The figure below is made up of square ABCD and rectangle DEFG. Given that BC = 22 cm and that G is the mid-point of AB, find the area of the figure.

Do not write in this space



Ans: _____ cm^2

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.

Do not write in this space

(45 marks)

6 Chin Meng earned the same amount of money each month. In October, he spent $1070 and saved the rest. The amount he spent in November was a 30% decrease from what he spent in October. As a result, his savings for November increased by 60%. How much money did Chin Meng earn each month?

Ans: _____ [3]

7 The table below shows the charges for water usage by PRB company.

Do not write in this space

Monthly Water Usage	Price per m^3
0 to 40 m^3	$1.21
More than 40 m^3	$1.52

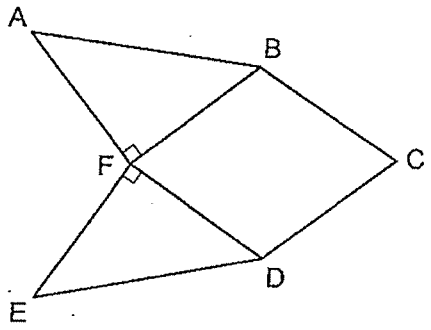
(a) Mdm Salimah's family used 40 m^3 of water in August. How much was her family charged for their water usage?

(b) Mr Muthu spent $103.12 on water usage in September. What was the volume of water Mr Muthu used in that month?

Ans: (a) _____ [1]

(b) _____ [2]

8 The figure below is made up of rhombus BCDF and two identical right-angled isosceles triangles, ABF and EFD. The perimeter of rhombus BCDF is $12p$ cm and the length of AB is $(p + 3)$ cm.



(a) Find the perimeter of figure ABCDEF in terms of p in the simplest form.

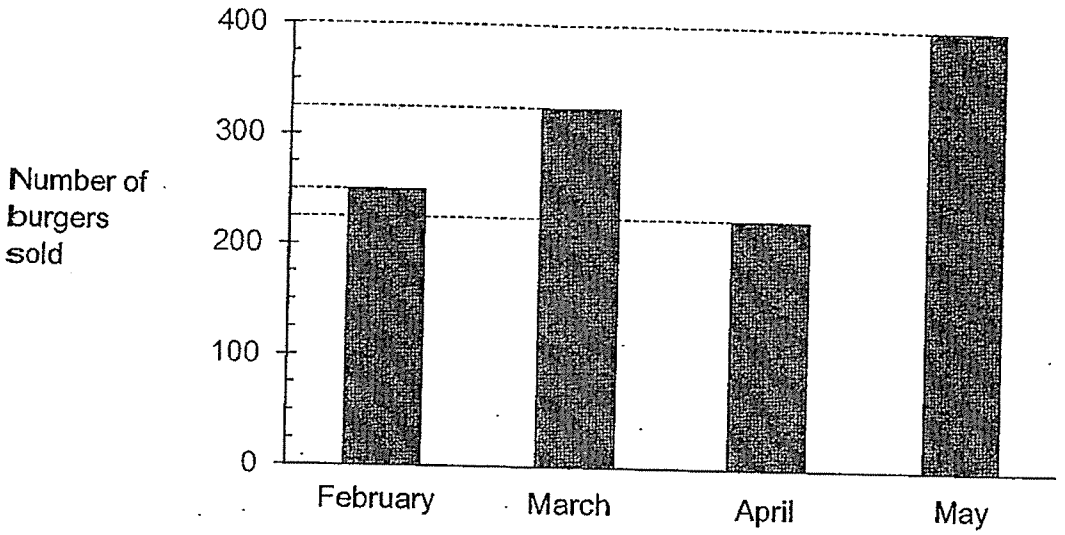
(b) Find the area of triangle ABF given that $p = 6$

Ans: (a) _____ [1]

(b) _____ [2]

9 The graph below shows the number of burgers sold by a fast food restaurant from February to May.

Do not write in this space



(a) What is the average number of burgers sold in each month from February to May?

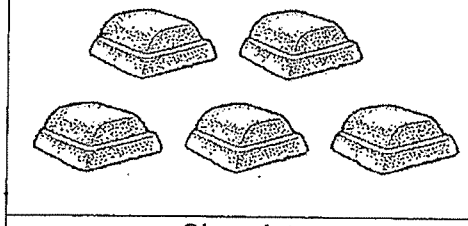
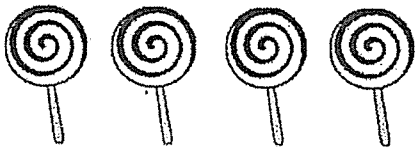
(b) Find the percentage increase in the number of burgers sold from February to March.

Ans: (a) _____ [1]

(b) _____ [2]

10 At Candyland, chocolates are only sold in packets of 5 pieces and lollipops are only sold in packets of 4 sticks at the prices shown below.

Do not write in this space

	
Chocolates 5 pieces for $1.99	Lollipops 4 sticks for $0.99

Judy spent $101.34 on some chocolates and lollipops at Candyland. She put all the chocolates and lollipops into bags such that there were 3 pieces of chocolates and 2 sticks of lollipops in each bag. How many sticks of lollipops did Judy buy from Candyland?

Ans: _____ [4]

11 In an Art Club, the number of girls is 4 times the number of boys. The number of girls who wear spectacles is $\frac{2}{5}$ the total number of children who wear spectacles in the Art Club. Given that 170 girls and 20 boys do not wear spectacles, find the total number of girls in the Art Club.

Do not write in this space

Ans: _____ [4]

12 The table below shows the prices of admission tickets to a theme park.

Do not write in this space

Type of ticket	Price per ticket
Child	$43
Adult	$55
Senior Citizen	$32

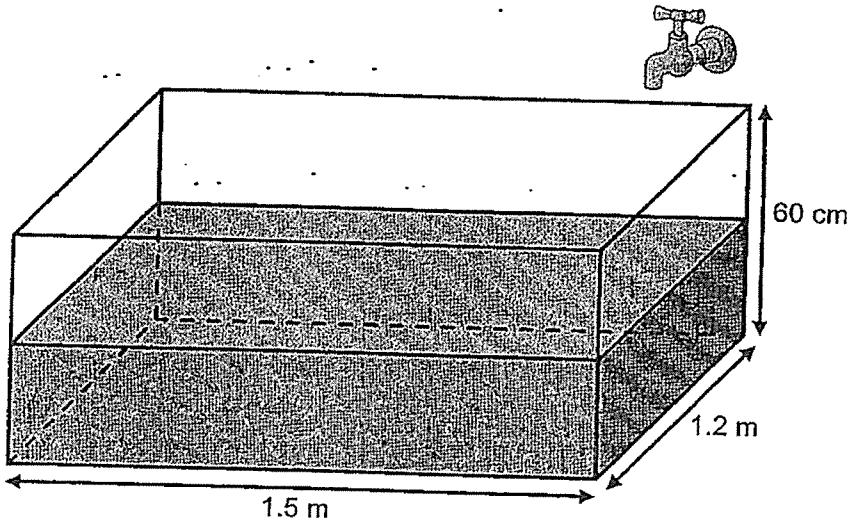
$4705

Mr Suraj paid ~~$5005~~ for admission tickets to the theme park for a group of tourists. $\frac{2}{3}$ of the tourists were children. The remaining tourists were adults and senior citizens in the ratio 5 : 2. How many children were there in the group of tourists?

Ans: _____ [3]

13 At first, a rectangular tank measuring 1.5 m by 1.2 m by 60 cm was half-filled with water as shown below. A tap was then turned on for half an hour to allow water to flow into the tank. In the end, the tank was $\frac{3}{5}$-filled. How many litres of water flowed from the tap per minute?

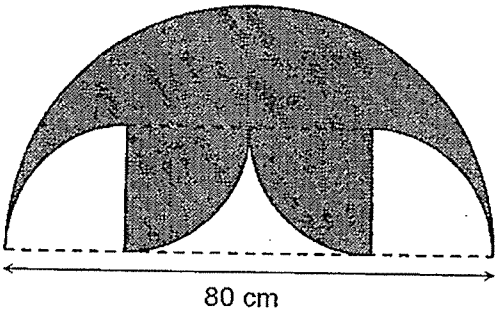
Do not write in this space



Ans: _____ [3]

14 The outline of the shaded figure below is formed by a semicircle, four identical quarter circles and two straight lines.

Do not write in this space



(a) Find the area of the shaded figure.

(b) Find the perimeter of the shaded figure.

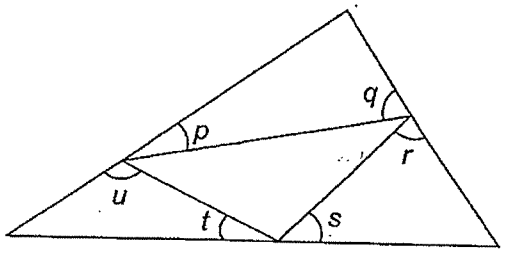
(Take $\pi = 3.14$)

Ans: (a) _____ [2]

(b) _____ [3]

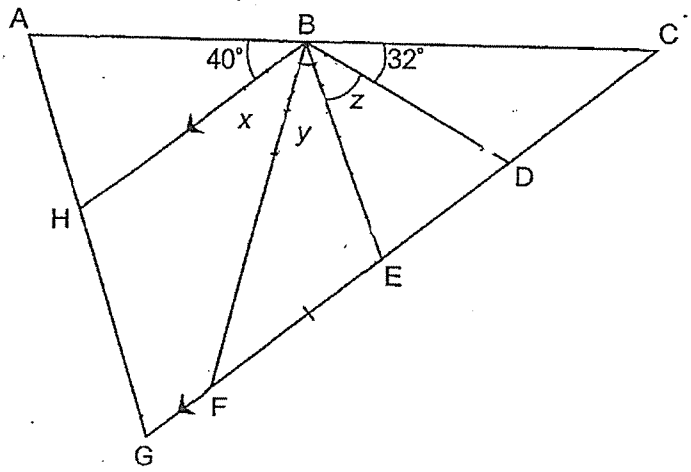
15 (a) In the figure below, find the sum of $\angle p$, $\angle q$, $\angle r$, $\angle s$, $\angle t$ and $\angle u$.

Do not write in this space



Ans: (a) _____ [1]

(b) The figure below is not drawn to scale.
In the figure, AGC is a triangle where BH // EG and BD = BE = EF.



(i) Find $\angle z$.

Ans: _____ [2]

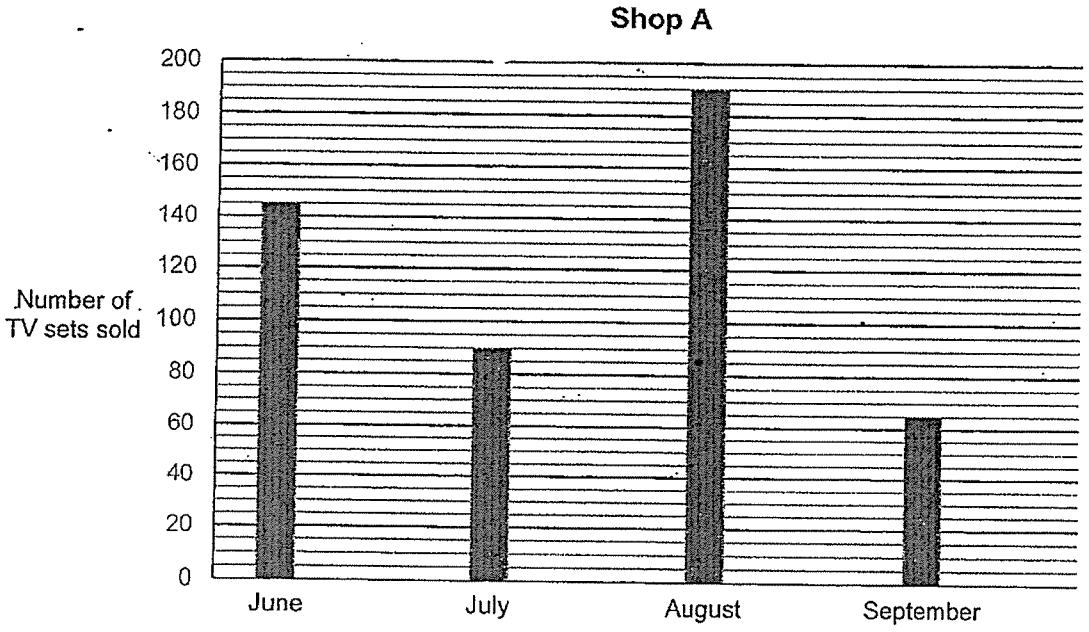
(ii) Each of the statements below is either true, false or not possible to tell from the information given. For each statement, put a tick (✓) to indicate your answer.

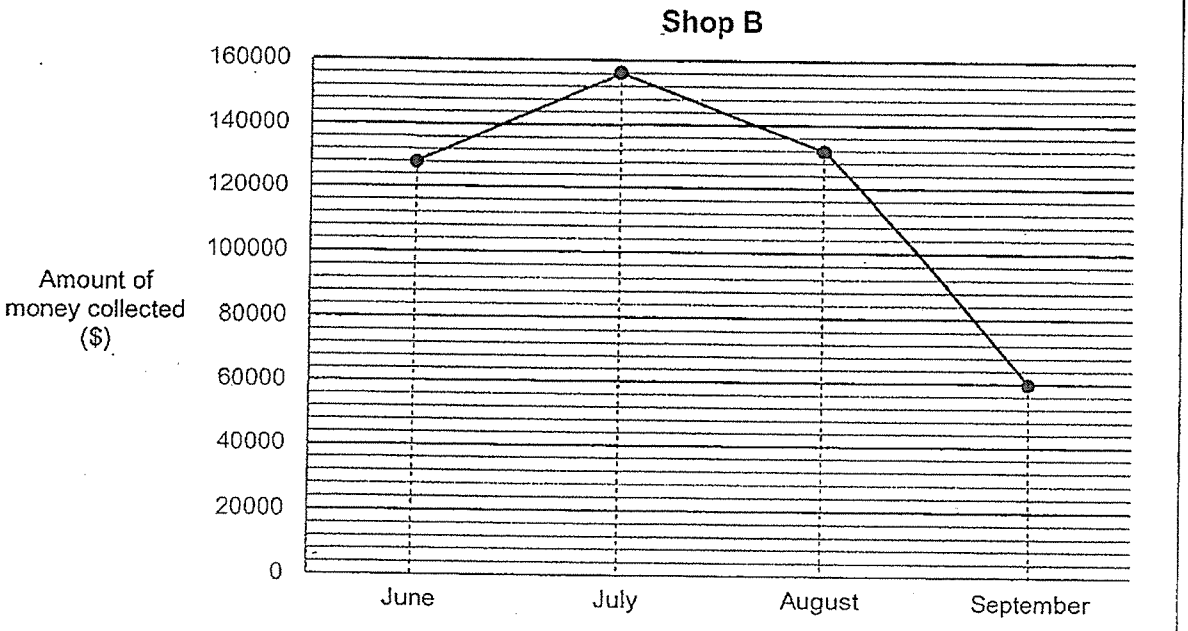
Statement	True	False	Not possible to tell
$\angle x = \angle y = \angle z$			
ABEG is a trapezium.			
$\angle AHB = \angle AGC$			

[2]

16 The graphs below show the number of television sets sold by Shop A and the amount of money collected by Shop B from the sale of television sets from June to September.

Do not write in this space





(a) Given that Shop B sold each television set at a fixed price of $1200, did it sell more, fewer or an equal number of television sets than Shop A in the month of July? Show your working clearly.

Do not write in this space

(b) Shop A had a promotion in the month of August where each television set was sold at 30% discount. Given that Shop A collected $34 250 more than Shop B in August, find the amount of discount given by Shop A for each television set sold.

Ans: (a) _____ [1]

(b) _____ [3]

17 Cedric used some sticks to form figures that follow a pattern. The first four figures are shown below.

Do not write in this space

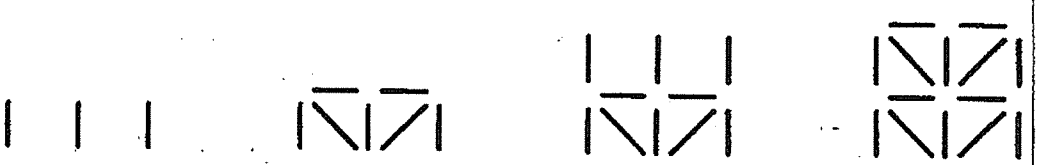


Figure 1 Figure 2 Figure 3 Figure 4

(a) The table below shows the number of sticks for the first four figures. Complete the table for Figure 5.

Figure number	Number of sticks
1	3
2	7
3	10
4	14
5	

[1]

(b) How many sticks are there in Figure 28?

(c) Cedric used 2327 sticks to form a figure. Which Figure number did he form?

Ans: (b) _____ [2]

(c) _____ [2]

End of Paper 2

Setters: Mdm Caroline Tay, Mrs Tina Tan, Mrs Norah Idil & Ms Lee Joo Lee

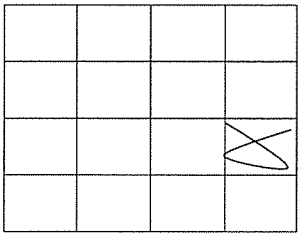
SCHOOL : HERNRY PARK PRIMARY SCHOOL
LEVEL : PRIMARY 6
SUBJECT : MATH
TERM : 2020 PRELIM

PAPER 1 BOOKLET A

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

Q 11	Q12	Q13	Q14	Q15
2	2	1	2	4

PAPER 1 BOOKLET B

Q16)	5
Q17)	AF and CD
Q18)	1080 cm3
Q19)	15%
Q20)	8
Q21)	a)A and C
Q21)	b) 
Q22)	25cm
Q23)	$56
Q24)	a)(5y + 13) $4
Q25)	50
Q26)	a)24 b)3

Q27)	35°
Q28)	40
Q29)	40
Q30)	8cm

PAPER 2

Q1)	10 + 10 + 15 = $35
Q2)	30/100 = 3/10 1/5 = 2/10 1 – 2/10 – 3/10 = 5/10 80 x 2 = 160 80 x 2 = 160 3/10 x 160 = 48
Q3)	½ h = 30min 300 ÷ 12 = 25 300 ÷10 = 30 30 x 30 + 25 x 30 = 1650
Q4)	180 – 55 – 90 = 35 180 – 71 – 90 = 19 180 – 19 – 19 – 35 = 72°
Q5)	22 ÷ 2 = 11 ½ x 11 x 22 = 121 22 x 22 = 484 484 + 121 = 605cm2
Q6)	321 ÷ 60 = 5.35 5.35 x 100 = 535 535 + 100 = $1605
Q7)	a)40 x 1.21 = $48.40 b)10312 – 48.4 = 54.72 54.72 ÷ 1.52 = 36 36 + 40 = 76m3
Q8)	a)12p ÷4 = 3p 3p x 4 + (p+3) x 2 = 12p + 2p + 6 = (14p + 6)cm b)3p = 3 x 6 = 18 ½ x 18 x 18 = 162cm2

Q9)	a)250 + 325 + 225 + 400 = 1200 1200 ÷ 4 = 300 b)325 – 250 = 75 75/250 x 100% = 30%
Q10)	10 x 3 = 30 10 x 2 = 20 20 ÷ 4 = 5 30 ÷5 = 6 6 x 1.99 + 5 x 0.99 = 16.89 101.34÷16.89 = 6 6 x 20 = 120.
Q11)	$20x$ – 170 = 2/5 x ($20x$ – 170) + ($5x$ – 20) $20x$ = 170 = 2/5 x ($25x$ – 190) $20x$ – 170 = $10x$ – 76 $20x$ = $10x$ + 94 $10x$ = 94 $20x$ = 94 x 2 = 188
Q12)	(14 x 43) + (5 x 55) + (2 x 32) = 941 4750 ÷941 = 51 5 x 14 = 70
Q13)	3/5 x 60 x 150 x 120 = 648000 648000 – 540000 = 108000 108000cm3 = 108ℓ 108 ÷ 30 = 3.6ℓ
Q14)	a)80 ÷ 4 =20 20 x 2 = 40 20 x 40 = 800 ½ x 3.14 x 40 x 40 = 2512 2512 – 800 = 1712cm2 b)3.14 x 40 = 125.6 125.6 + 20 + 20 = 165.6 125.6 + 165.6 = 291.2cm
Q15)	a)180 x 3 = 540 540 – 180 = 360° b)i)180 – 32 – 40 = 108 180 – 108 = 72 Z = 180 – 72 – 72 = 36°

	ii) Not True
Q16)	a)156000 ÷ 1200 = 130 More b)132000 + 34250 = 166250 166250 ÷ 70 x 30 = 71250 71250 ÷ 190 = $375
Q17)	a)17 b)3 + 4 = 7 21 (7 x 11) = 98 c)2327 ÷7 = 332 R3 332 x 2 = 664 664 + 1 = 665