2021 PRIMARY 6 MID-YEAR EXAMINATION

Name: _____ ( ) Date: 10 May 2021

Class: Primary 6 ( ) Time: 8.00 a.m. - 9.00 a.m.

Parent's Signature: _____ Marks: _____ / 100

Paper 1 comprises 2 booklets, A and B.

MATHEMATICS
PAPER 1
(BOOKLET A)

/ 20

INSTRUCTIONS TO CANDIDATES

1. Write your name, class and register number.
2. Do not turn over this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Shade your answers in the Optical Answer Sheet (OAS) provided.
6. You are not allowed to use a calculator.

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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]

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1. In 6.015, what is the place value of the digit 0?

   (1) 0
   (2) 0.1
   (3) tenths
   (4) hundreds

2. Find the value of $6 + 18 \div 3 \times 2 - 9$.

   (1) 15
   (2) 9
   (3) 7
   (4) 0

3. Ahmad has \$2 and Ben has \$4.
   Which one of the following statements is **incorrect**?

   (1) The ratio of Ahmad's money to Ben's money is 2 : 1.
   (2) The ratio of Ahmad's money to Ben's money is 1 : 2.
   (3) The ratio of Ben's money to Ahmad's money is 2 : 1.
   (4) The ratio of Ben's money to Ahmad's money is 4 : 2.

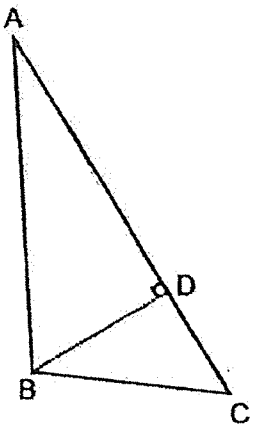
4. Express 108 min in hours.

   (1) $1\frac{12}{25}$ h
   (2) $1\frac{4}{25}$ h
   (3) $1\frac{2}{15}$ h
   (4) $1\frac{4}{5}$ h

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5. Which one of the following pairs is the base and height of Triangle ABC?

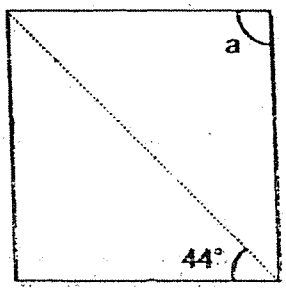
	Base	Height
(1)	AB	BC
(2)	AC	BD
(3)	AC	BC
(4)	AD	BD



6. Find the product of all the factors of 4.

(1) 7
(2) 8
(3) 9
(4) 16

7. What is the value of $\angle a$ in the rhombus?



(1) 46°
(2) 90°
(3) 92°
(4) 136°

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8. The table shows the amount of play time Eisha has for three days.

	Day 1	Day 2	Day 3
Duration *(hours)*	0	2	4

What is Eisha's average amount of play time for the three days?

(1) 6 h
(2) 2 h
(3) 3 h
(4) 4 h

9. The table shows the parking rates at a car park.

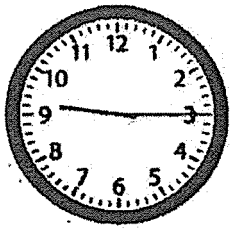
Time	Rate
1st hour	$2.50
Every additional 15 min	$0.50

Carol parked her car at the car park from 8.30 a.m. to 10.30 a.m.
How much did she pay?

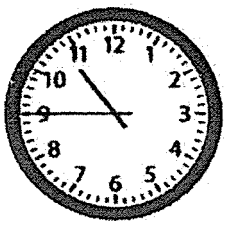
(1) $5.00
(2) $4.50
(3) $3.00
(4) $2.50

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10. In the morning, Dawn started doing her homework at the time shown below.



She completed the work before noon.



How many $\frac{1}{4}$ turns did the minute hand of the clock go through?

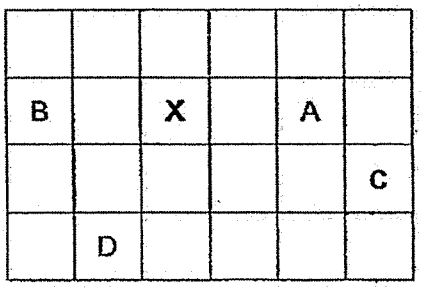
(1) 10
(2) 2
(3) 3
(4) 6

11. 0.25 of a number is 40. What is 80% of the number?

(1) 10
(2) 32
(3) 128
(4) 160

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12. An object was moved South and then in the North-West direction. It ended at Point X. Where was the start point of the object ?



(1) A
(2) B
(3) C
(4) D

13. Hela paid for an eraser that cost *k* cents with a two-dollar note. How much change did she receive?

(1) $\$(2 - k)$

(2) $\$(2 - \frac{k}{100})$

(3) $\$(200 - k)$

(4) $\$(200 - \frac{k}{100})$

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14. There were 12 chairs in each of the 15 rows in a hall.
60 more chairs were brought into the hall.
All the chairs were then rearranged equally into 20 rows.
Which one of the following shows the correct way to find the number of chairs in each row?

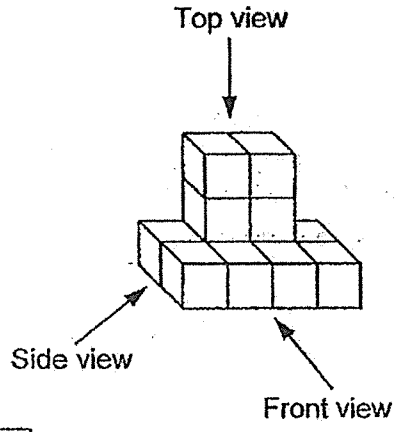
(1) $12 \times 15 + 60 \div 20$

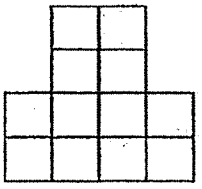
(2) $(12 \times 15) + 60 \div 20$

(3) $(12 \times 15) \div (60 \div 20)$

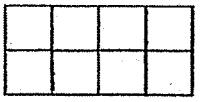
(4) $(12 \times 15 + 60) \div 20$

15. Which of the following views is **incorrect** ?

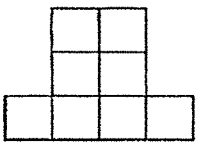




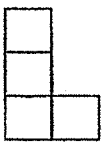
(1)



(2)



(3)



(4)

End of Booklet A *Go on to Booklet B*

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Paper 1 comprises 2 booklets, A and B.

MATHEMATICS
PAPER 1
(BOOKLET B)

25

INSTRUCTIONS TO CANDIDATES

1. Write your name, class and register number.
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3. Follow all instructions carefully.
4. Answer all questions.
5. Write your answers in this booklet
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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]

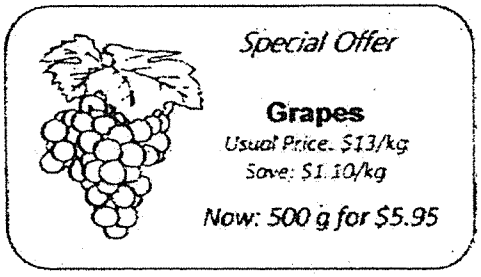
16. Write 0.375 as a fraction in its simplest form.

Ans: _____

17. The average length of a dozen poles is 1 m.
What is the total length of the poles?

Ans: _____ m

18. Find the cost of 1.5 kg of grapes?



Ans: $_____

19. Express 1 m^2 in square centimetres.

Ans: _____ cm^2

20. Simplify $7y - 3 + 9y + 10 - 6y$.

Ans: _____

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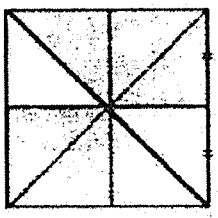
Questions **21** to **30** carry 2 marks each. Show your working clearly in the space provided for each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. [20 marks]

21. Use all the digits below to form the smallest 7-digit number that is **divisible by 4.**

6, 0, 4, 2, 8, 1, 7

Ans: _____

22. What fraction of the square is shaded?



Ans: _____

23. The table below shows the membership of a chess club.

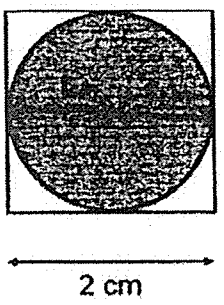
Year	2020	2021
Number of members	50	40

Find the percentage decrease in membership.

Ans: _____ %

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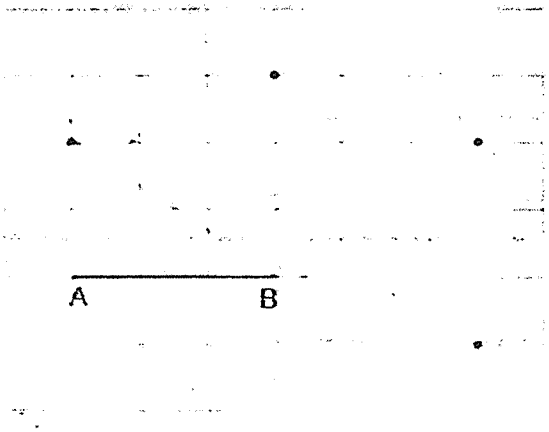
24. The figure is made up of a circle and a square. Find the unshaded area.
Give your answer in terms of π.



Ans: _____ cm^2

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25. In the square grid, join a dot to Line AB to form an acute angle, ∠ABC.
Label and *mark* ∠ABC clearly.



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26. The average score of a number of games played is 13.
The sum of all the scores is 52.
Find the number of games played.

Ans: _____

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27. Irwin used $\frac{1}{4}$ of a 2-kg pack of flour to make some cupcakes.

He then made some dough with $\frac{2}{5}$ of the remaining amount of flour.

How much flour was used to make the dough?

Ans: _____ kg

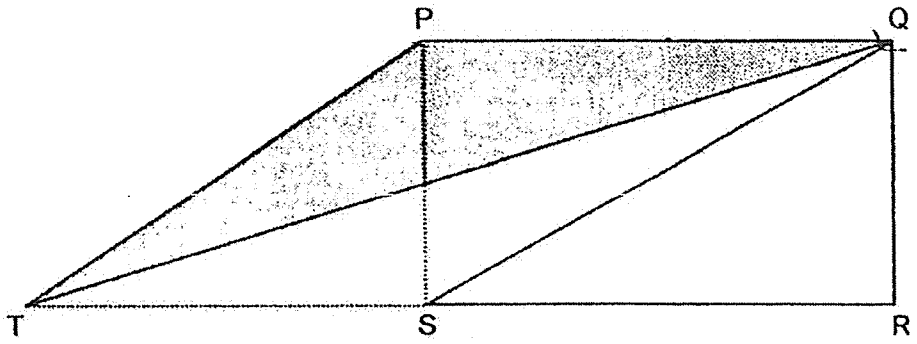
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28. The actual lengths of Rope X and Rope Y are in **2 decimal places**.
When rounded to the nearest metre, their lengths are each 10 m long.
What is the *greatest possible difference* between the lengths of Rope X and Rope Y?

Ans: _____ m

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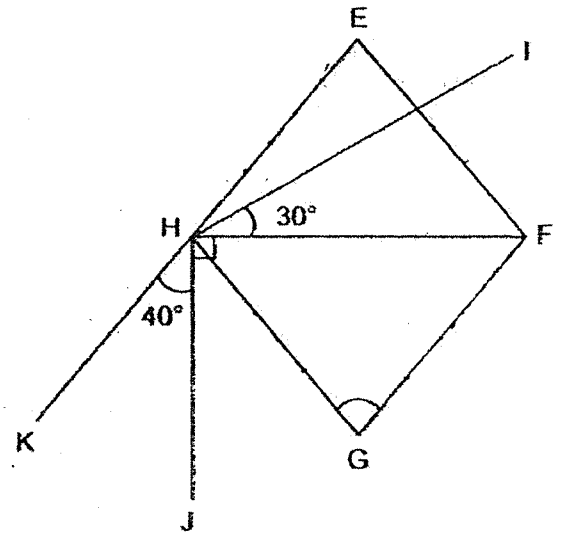
29. PQRS is a rectangle. The area of triangle QRS is 14 cm^2.
TSR is a straight line and PQ is 7 cm. Find the height of triangle PQT.



Ans: _____ cm

---

30. In the figure, EFGH is a rhombus. EHK is a straight line.
$\angle IHF = 30°$ and $\angle JHK = 40°$. Find $\angle FGH$.



Ans: _____

End of Booklet B

End of Paper 1

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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]

Q1. The table shows the distance jogged by 3 students in a week.

Names	Distance (km)
Aini	$4m - 2$
Bala	8
Caili	$m + 3$

(a) Find the total distance jogged by Aini, Bala and Caili.
Express your answer in terms of m.

(b) If $m = 4$, find the total distance jogged by the 3 students.

Ans: (a) _____ km [1]

(b) _____ km [1]

Q2. Caili and Devi shared some stickers equally. After Caili gave Devi 15 stickers, the ratio of Caili's stickers to Devi's stickers became 3 : 4.
Find the total number of stickers that Caili and Devi shared.

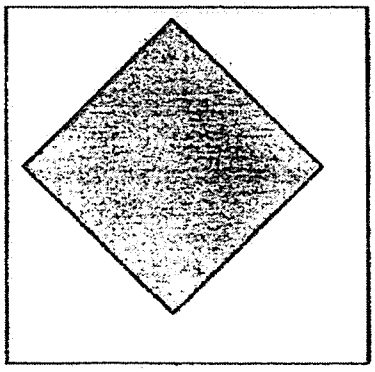
Ans: _____

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Q3. Alan spent $\frac{7}{10}$ of his allowance on food. He then spent half of his remaining allowance on some stationery items. He had $3 left. How much was Alan's allowance?

Ans: $_____

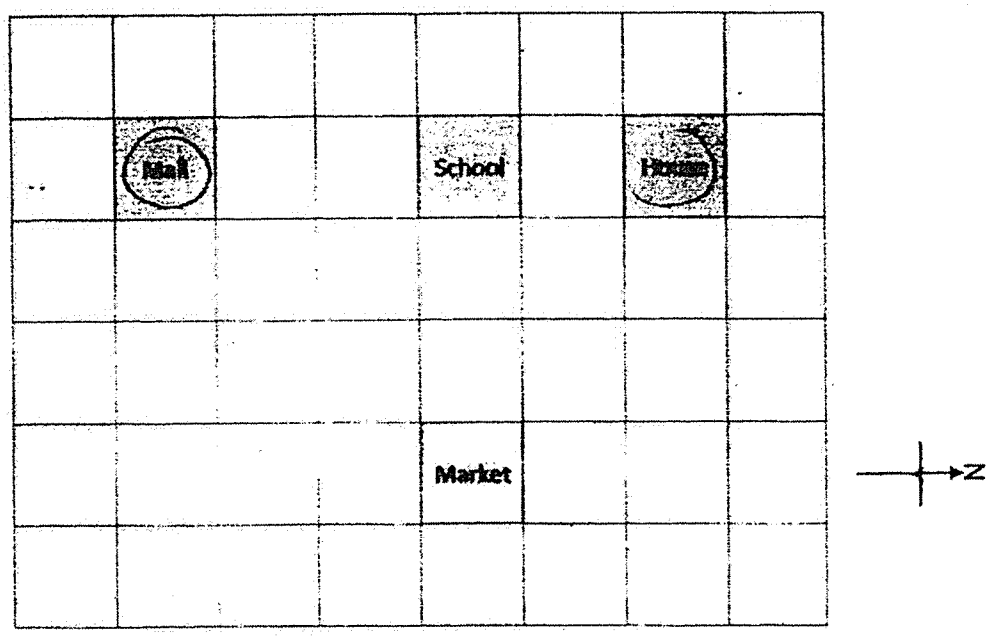
Q4. The following figure is made up of 2 squares.
The *length* of each square is a *whole number*.
The unshaded area is 132 cm². Find the perimeter of the bigger square.



Ans: _____ cm

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Q5. Bala's house, his school, a market and a mall are located as shown in the square grid below.



(a) In which direction is Bala's house from the Mall?

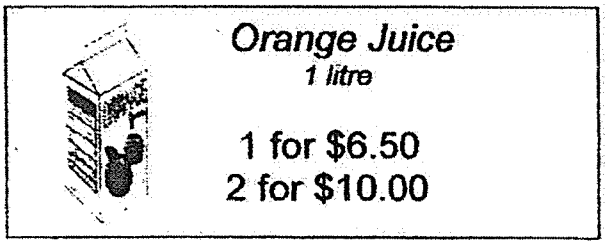
(b) A new clinic is to be built at a location south-east of the School and south of the Market.
Put a (✓) in the square where the new clinic will be built? [1]

Ans. (a) _____ [1]

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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 or part-question. [45 marks]

Q6. Aini drinks 300 ml of orange juice every day. She found a special offer online as shown below.



What is the least amount of money Aini has to pay such that she can buy enough orange juice for 2 weeks?

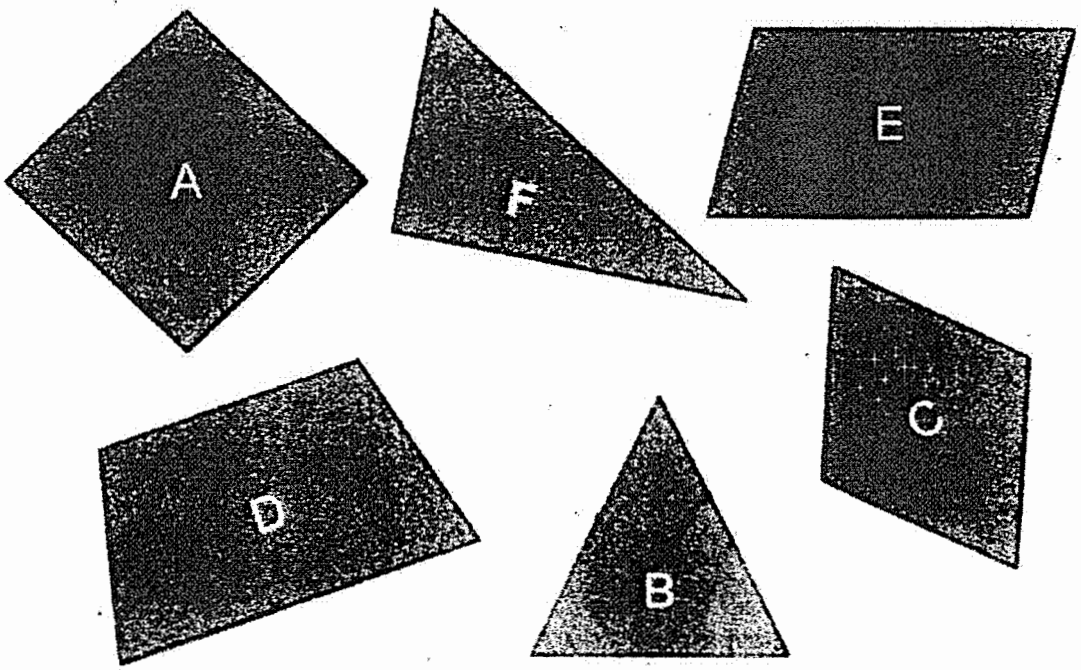
Ans: _____ [3]

Q7. The usual price for two identical laptops was $1 500 in Store A and $1 250 in Store B. During a sale, both stores offered the same percentage discount for the laptops. The discounted price for the laptop in Store B is $200 cheaper than the discounted price for the laptop in Store A.
What is the percentage discount given?

Ans: _____ [3]

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Q8. Complete the table.

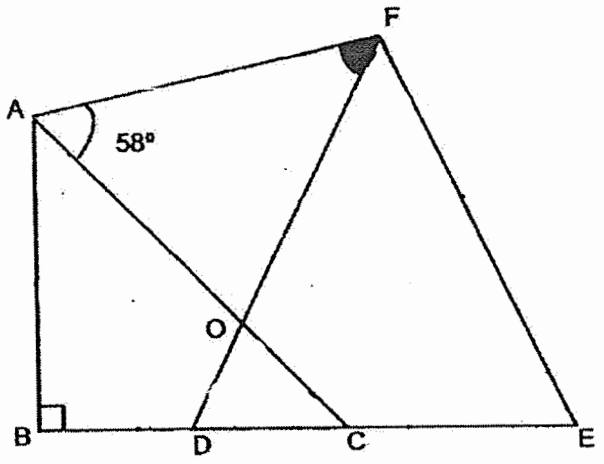


Shape	Figure	Write down one property of the figure
(a) Isosceles triangle		
(b) Rhombus		
(c)	D	

[3]

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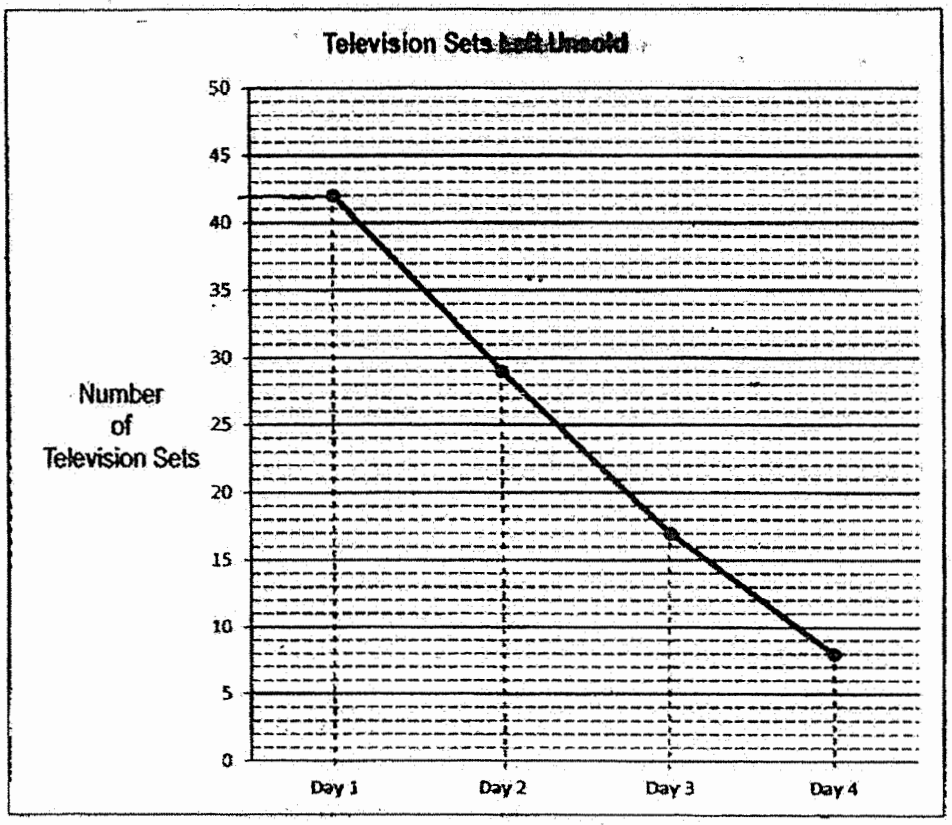
Q9. In the figure below, not drawn to scale, ABC is an isosceles triangle and DEF is an equilateral triangle. BE is a straight line.
Triangles ABC and DEF overlap to form triangle DOC. Find ∠AFD.



Ans: ∠AFD = _____ [3]

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Q10. An electronics store had a 4-day sale for 50 television sets. The following graph shows the number of television sets left unsold at the end of each day.



(a) What was the total number of television sets sold by the store at the end of the 4-day sale?

(b) On which day was the most number of television sets sold?

Ans: (a) _____ [1]

(b) Day_____ [2]

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Q11. In a school, $\frac{9}{20}$ of the members in a Reading Club are boys.

In the Comic Club, the number of girls is $\frac{2}{3}$ of the number of boys.

There is an equal number of girls in both clubs.

There are 60 more members in the Comic Club than in the Reading Club.

(a) Express the number of girls in the Comic Club as a fraction of the total number of members in the Comic Club.
Leave your answer in the simplest form.

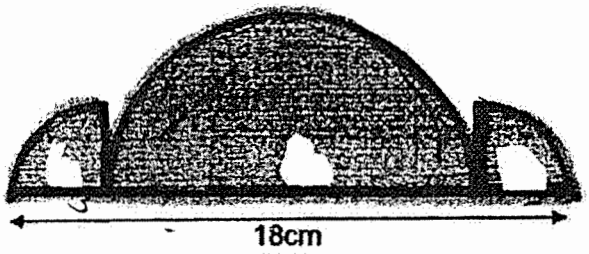
(b) Find the number of girls in the Reading Club.

Ans: (a) _____ [1]

(b) _____ [3]

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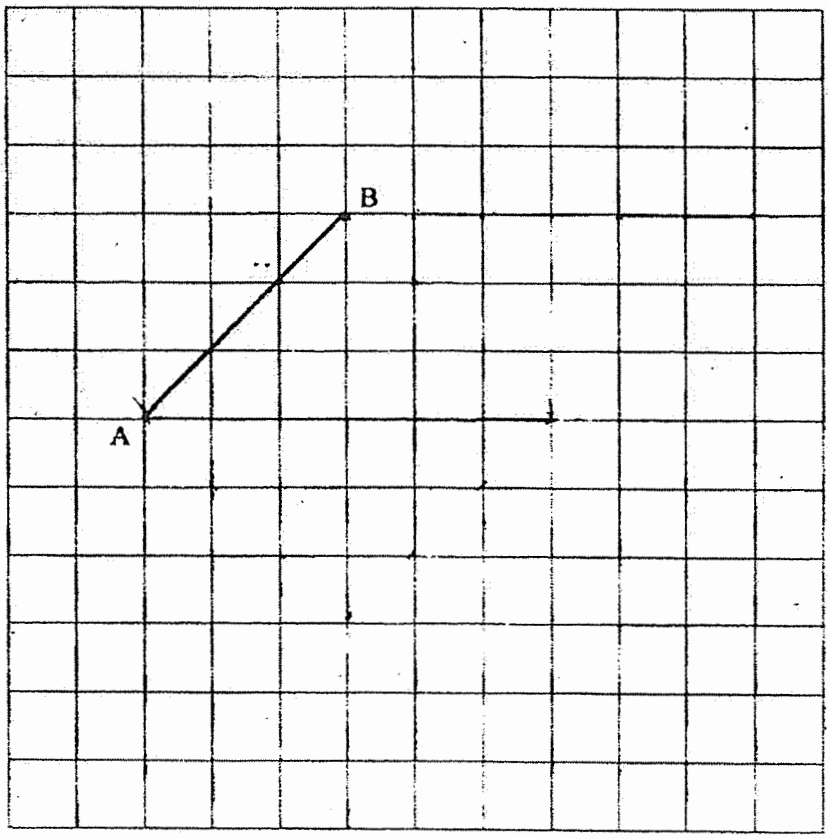
Q12. The figure is made up of a semicircle and two identical quarter circles. The diameter of the semicircle is 4 times the radius of the quarter circles. Find the perimeter of the figure. (Take $\pi = 3.14$)



Ans: _____ [4]

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Q13. Use the square grid to answer parts (a) to (d)



(a) Draw a square, **ABCD**. The line AB is drawn for you. [1]

(b) Join the diagonal AC.
Draw a line BE to form a parallelogram **ABEC**. [1]

(c) Measure the length of BE. *Give your answer to the nearest cm.*

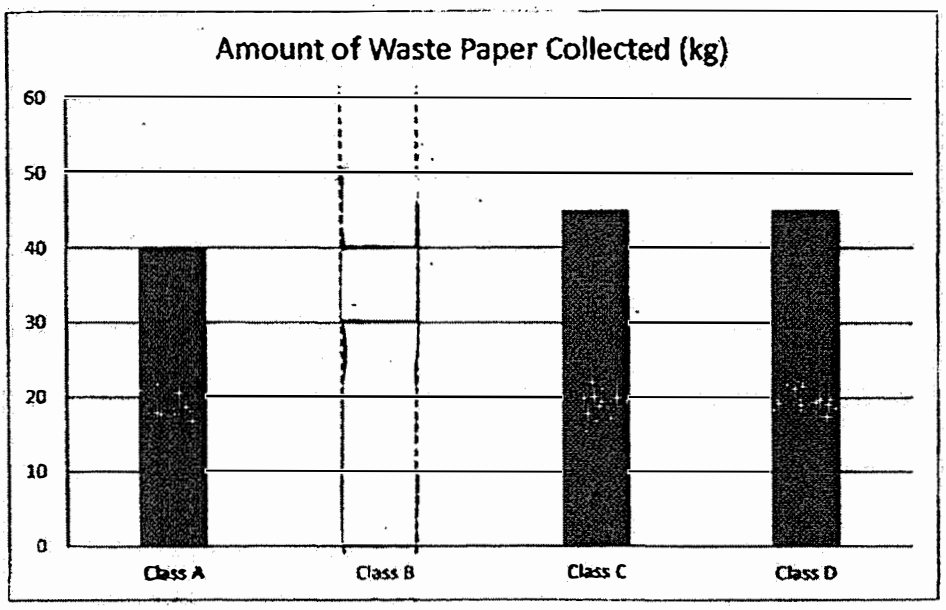
(d) Measure ∠BEC.

Ans: (c) _____ [1]

(d) ∠BEC = _____ [1]

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Q14. Class A, B, C and D collected waste paper for recycling.
Use the following information to answer the questions below.



(a) The amount of waste paper that Class A collected is 80% of what Class B had collected. ***Complete the bar for Class B.***
How much waste paper did Class B collect?

Ans: (a) _____ [2]

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. [2]

	Statement	True	False	Not Possible to Tell
(b)	Class C collected 45 kg of waste paper.			
(c)	When Class E joined the 4 classes, the average amount of waste paper collected becomes 45 kg.			

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Q15.

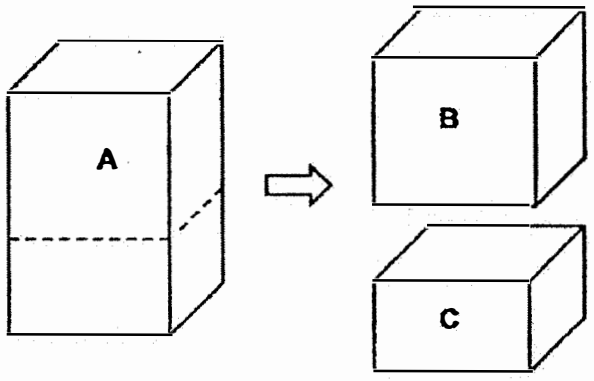
Group	Number of Students	Average Amount Collected
Red	9	$23
Blue	11	$25
Green	8	$24
Yellow	?	?

40 students in a class took part in a fund-raising event.
The total amount collected by the four groups was $1040.
What was the average amount collected by students in the Yellow Group?

Ans: _____ [4]

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- Q16. A rectangular block, **A**, with a volume of 8 424 cm^3 was cut along the dotted line into 2 smaller blocks. Block **B** is a cube and Block **C** is a cuboid. The volume of Block B is 3 240 cm^3 more than Block C.



(a) Find the length of Block B.

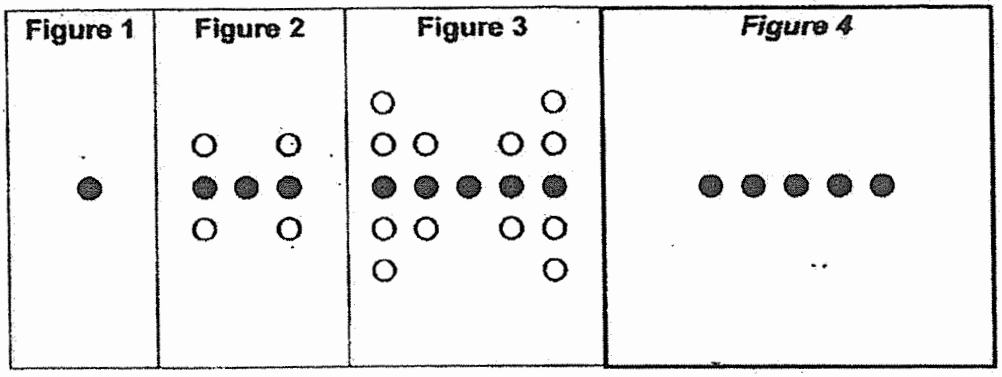
(b) Find the height of Block C.

Ans: (a) _____ [3]

(b) _____ [2]

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Q17. Shaded and unshaded circles form figures that follow a pattern.
The first three figures are shown below.



(a) Add circles to complete Figure 4 in the space above. [1]

(b) Complete the table for **Figure 6** and **Figure 17**. [2]

	Figure	Number of Shaded Circles	Number of Unshaded Circles
	1	1	0
	2	3	4
	3	5	12
(i)	6		60
	7	13	84
(ii)	17		544

(c) Find the number of unshaded circles for **Figure 20**.

Ans: (c) _____ [2]

END OF PAPER 2 -

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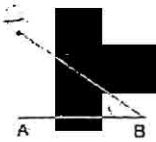
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YEAR : 2021
LEVEL : PRIMARY 6
SCHOOL : TAO NAN
SUBJECT : MATHEMATICS
TERM : MID-YEAR EXAM

BOOKLET A (PAPER 1)

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

BOOKLET B (PAPER 1)

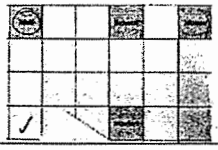
Q16	$\frac{0.375}{1000} = \frac{3}{8}$
Q17	12 x 1 = 12m
Q18	5.95 x 3 = $17.85
Q19	1m x 1m 100 x 100 = 10000cm2
Q20	10y + 7
Q21	1024768
Q22	$\frac{6}{8} = \frac{3}{4}$
Q23	50 – 40 = 10 $\frac{10}{50}$ x 100% = 20%
Q24	2 ÷ 2 = 1 (Radius of O) 2 x 2 = 4 (Area of square) π x 1 x 1 = π 4 - π = (4- π) cm2
Q25	
Q26	52 ÷ 13 = 4
Q27	$\frac{3}{4}$ x $\frac{1}{5} = \frac{3}{10}$ $\frac{3}{10}$ x 2 = $\frac{3}{5}$ kg

model paper

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Q28	10.49 – 9.50 = 0.99m
Q29	$\frac{1}{2}$ x 4 x 7 = 14 ANS : 4cm
Q30	< EHI = 180° - 40° - 90° - 30° = 20° < GFH = 20° + 30° = 50° < FGH = 180° - 50° - 50° = 80°

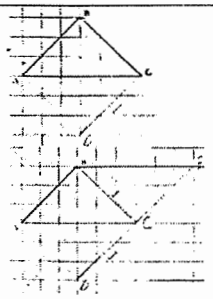
PAPER 2

Q1	a) (4m—2) +8 (+m+3)=(5m+9)km b) 4(4) – 2 + 8 + 4 + 3 = 29km
Q2	Caili : Devi : Total 1 : 1 : 2 7 : 7 : 14 7 – 6 = 1 15 ÷ 1 = 15 15 x 14 = 210
Q3	$\frac{3}{10} \times \frac{1}{2} = \frac{3}{20}$ $\frac{3}{20}$ of total money = 3 Total money = $3 \times \frac{20}{3}$ =$20
Q4	14 x 4 = 56cm
Q5	a) North b) 
Q6	OJ for 2 weeks = 300 x 14 = 4200 1000 x 2 = 2000 4200 ÷ 2000 = 2R200 10 x 2 + 6.50 = $26.50
Q7	1500 – 1250 = 250 300 ÷ 1500 x 100% = 20%

Q8

Shape	Figure	Write down one property of the figure
a) Isosceles triangle	B	There are 2 angles in the triangle which are equal to each other.
b) Rhombus	C	There are 2 pairs of parallel lines.
c) Trapezium	D	There is a pair of parallel lines.

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Q9	$< FED = < FDE = < DFE$ $= 180° \div 3 = 60°$ $< BAC = < BCA$ $= \frac{180° - 90°}{2} = 45°$ $< DOC = < FOA$ $< AFD = 180° - 58° - 75° = 47°$
Q10	a) $50 - 8 = 42$ b) Day 1 = $50 - 42 = 8$ Day 2 = $42 - 29 = 13$ Day 3 = $29 - 17 = 12$ Day 4 = $17 - 8 = 9$ ANS : DAY 2
Q11	a) $\frac{22}{55} = \frac{2}{5}$ b) $33 - 18 = 15$ $60 \div 15 = 4$ Girls = $4 \times 22 = 88$
Q12	$4 + 1 + 1 = 6$ Radius of 1 quarter circle = $18 \div 6 = 3$ Radius of semicircle $3 \times 4 = 12$ $12 \div 2 = 6$ $\frac{1}{4} \times 2 \times 3.14 \times 3 = 4.71$ $\frac{1}{2} \times 2 \times 3.14 \times 6 = 18.84$ $4.71 + 3 + 18.84 + 3 + 4.71 + 18 = 52.26cm$
Q13	a)  b) c) 6.2cm d) 45cm
Q14	a) 80% of total = 40 100% of total = $\frac{40}{80} \times 100 = 50kg$

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		Statement	True	False	Not possible to tell
		b) Class C collected 45kg of waste paper.	√		
		c) When Class E joined the 4 classes, the average amount of waste paper collected becomes 45kg			√

Q15

$40 - 9 - 11 - 8 = 12$

$1040 - 207 - 275 - 192 = 366$

$366 \div 12 = \$30.50$

Q16

a) $8424 - 3240 = 5184$

$5184 \div 2 = 2592$

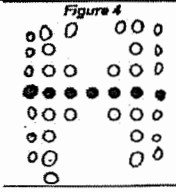
$2592 + 3240 = 5832$

$\sqrt[3]{5832} = 18\text{cm}$

b) $2592 \div 18 \div 18 = 8\text{cm}$

Q17

Figure 4



a)

b)

Figure	Number of shaded circles	Number of unshaded circles
1	1	0
2	3	4
3	5	12
-	-	-
-	-	-
(i)6	11	60
7	13	84
-	-	-
-	-	-
(ii)17	33	561

c) $20 \times 2 - 1 = 39$

$39 \times 20 - 20 = 760$

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