METHODIST GIRLS' SCHOOL (PRIMARY)

Founded in 1887

MID YEAR EXAMINATION 2022
PRIMARY 6
MATHEMATICS

PAPER 1
BOOKLET A

Total Time for Booklets A and B: 1 hour

INSTRUCTIONS TO CANDIDATES

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

Name: _____ ( )

Class: Primary 6._____

Date: 12 May 2022

This booklet consists of 7 printed pages including this page.

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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 correct oval (1, 2, 3 or 4) on the Optical Answer Sheet. (20 marks)

---

1 2 hundred thousands + 9 thousands + 2 hundreds + 2 ones = _____

(1) 20 922
(2) 29 202
(3) 200 922
(4) 209 202

2 Find the value of 742.5 ÷ 7. Round your answer to 1 decimal place.

(1) 106.0
(2) 106.1
(3) 160.0
(4) 160.1

3 Express 40 cm as a fraction of 2 m.

(1) $\frac{1}{5}$
(2) $\frac{1}{20}$
(3) $\frac{1}{50}$
(4) $\frac{1}{200}$

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4 Find the value of $\frac{3}{4} \div \frac{1}{12}$.

(1) $\frac{1}{16}$

(2) $\frac{1}{9}$

(3) 9

(4) 16

5 A machine can print 70 cards in 3 minutes.
At this rate, how many cards can it print in 1 hour?

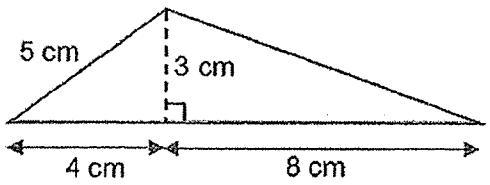
(1) 210

(2) 1400

(3) 2100

(4) 4200

6 Find the area of the triangle shown below.



(1) 12 cm^2

(2) 18 cm^2

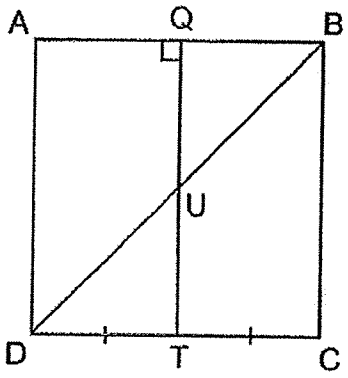
(3) 20 cm^2

(4) 30 cm^2

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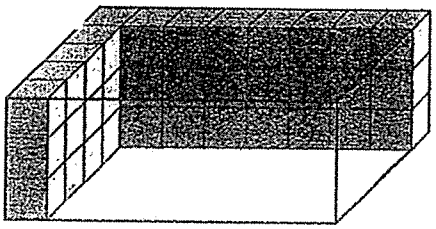
7 ABCD is a square. QT and BD are straight lines.



Which of the following is not true?

(1) QT // BC
(2) QT ⊥ DC
(3) ∠DUT = ∠UDT
(4) ∠ADU + ∠QUB = 180°

8 A rectangular container is partially filled with 1-cm cubes as shown below.
What is the volume of the container?

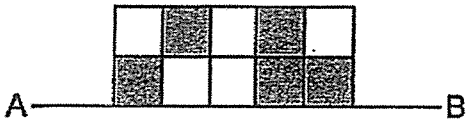


(1) 84 cm^3
(2) 96 cm^3
(3) 105 cm^3
(4) 120 cm^3

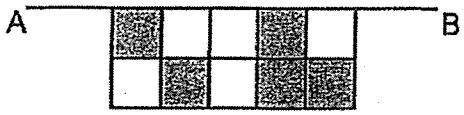
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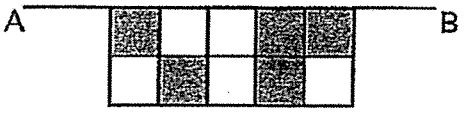
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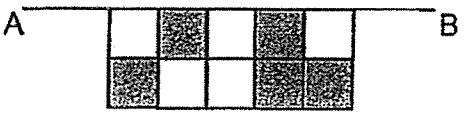
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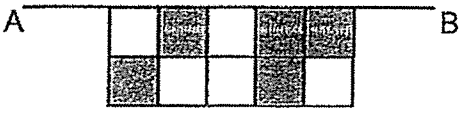


The top half of a symmetric figure is shown above. AB is the line of symmetry.
Which one of the following completes the symmetric figure?

(1) 

(2) 

(3) 

(4) 

10 Kelly was facing south-west. She turned 315° anti-clockwise.
In which direction is she facing now?

(1) North
(2) South
(3) East
(4) West



(Go on to the next page)

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11 Using all the digits 2, 5, 7 and 8, form the largest multiple of 5 between 1000 and 8000.

(1) 7825
(2) 7852
(3) 8725
(4) 8752

12 Su Fen's score for Mathematics improved from 50 marks to 75 marks. What was the percentage increase in marks?

(1) $33\frac{1}{3}\%$
(2) 50%
(3) $66\frac{2}{3}\%$
(4) 150%

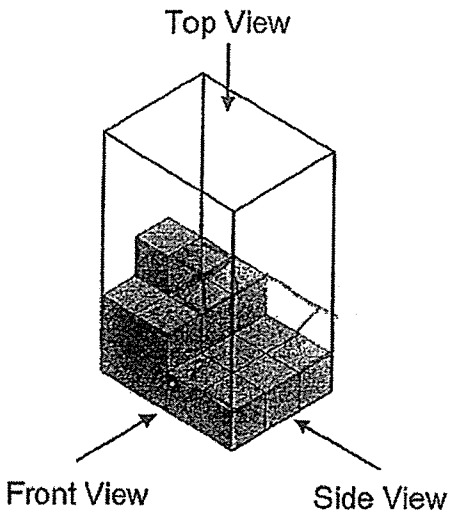
13 There are an equal number of students in class 6A and 6B.
The ratio of the number of boys to the number of girls in class 6A is 1 : 2.
The ratio of the number of boys to the number of girls in class 6B is 1 : 3.
Find the ratio of the number of girls in 6A to the total number of students in class 6A and 6B.

(1) 1 : 3
(2) 1 : 7
(3) 2 : 3
(4) 2 : 7

(Go on to the next page)

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14 The solid below is built using 1-cm cubes and placed into a glass tank.



What is the greatest number of cubes that can be added to the solid so that the side view is not changed?

(1) 8
(2) 9
(3) 10
(4) 14

15 Nora and Ming baked some cookies over two days. On Monday, Nora baked 29 cookies more than Ming. On Tuesday, Nora baked another 15 cookies and Ming baked another 20. At the end of the two days, the number of cookies Nora baked was $\frac{3}{5}$ of the total number of cookies baked by the two girls. How many cookies did Nora bake on both days?

(1) 24
(2) 36
(3) 48
(4) 72

(Go on to Booklet B)

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METHODIST GIRLS' SCHOOL (PRIMARY)

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MID YEAR EXAMINATION 2022
PRIMARY 6
MATHEMATICS

PAPER 1
BOOKLET B

Total Time for Booklets A and B: 1 hour

INSTRUCTIONS TO CANDIDATES

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

Name: _____ ( )

Class: Primary 6._____

Date: 12 May 2022

/25

Parent's Signature: _____

This booklet consists of 9 printed pages including this page.

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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)

Do not write in this space.

16 Christina bought 5 pens at $2.75 each.

How much did she pay for the pens in total?



Ans: $_____

17 The mass of a tennis ball when rounded to the nearest tenth is 58.0 g.

What is the smallest possible mass of the tennis ball?

Ans: _____ g

18 Find the value of $5 \times (38 - 14) + 6 + 27$.

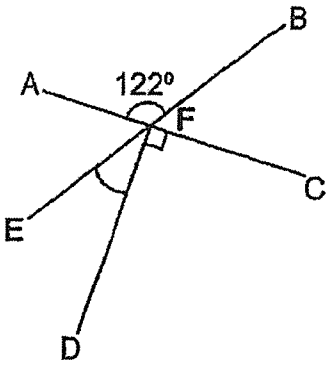
Ans: _____

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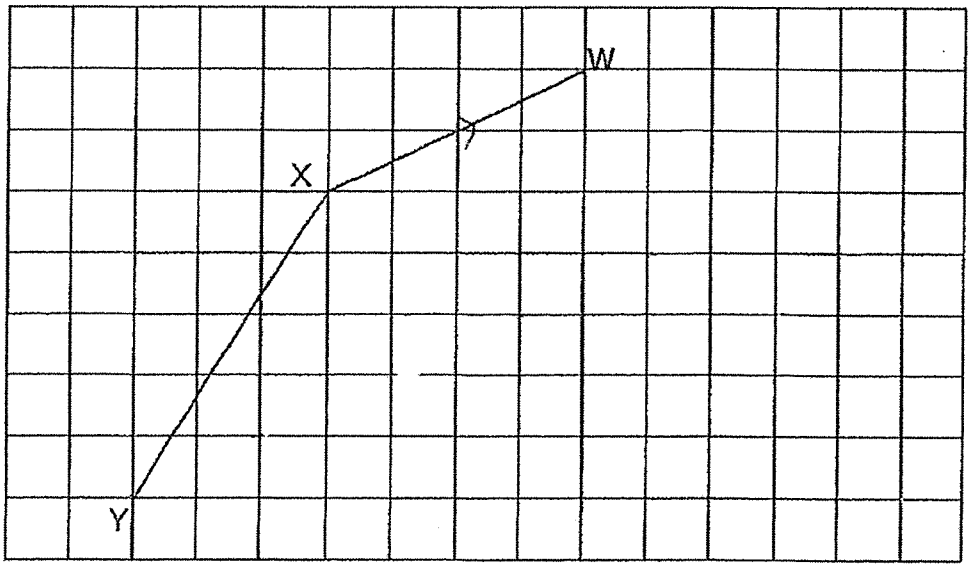
19 In the figure, AC and BE are straight lines. Find ∠EFD.

Do not write in this space.



Ans: _____ °

20 In the square grid, WX and XY are two sides of a trapezium WXYZ. The ratio of the length of XW to the length of YZ is 2 : 5 . Complete the trapezium by drawing the other two sides in the grid below.



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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 Muffins are sold in boxes of 1, 4 or 6. Tammy bought 45 muffins.

What is the least number of boxes that Tammy bought?

Ans: _____

22 A train left Town A at 10.30 p.m. and reached Town B at 8.25 a.m. the the next day. How long did the journey take? Give your answer in hours and minutes.

Ans: _____h _____min

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23 Mr Wong bought 576 roses. The ratio of the number of red roses to the number of white roses was 3 : 2. The ratio of the number of white roses to the number of pink roses was 1 : 2. How many pink roses did Mr Wong buy?

Do not write in this space.

Ans: _____

24 A rectangular container measuring 60 cm long, 20 cm wide and 30 cm high is filled with water to a height of 12 cm. How much more water is needed to fill the container completely?

Ans: _____ cm^3

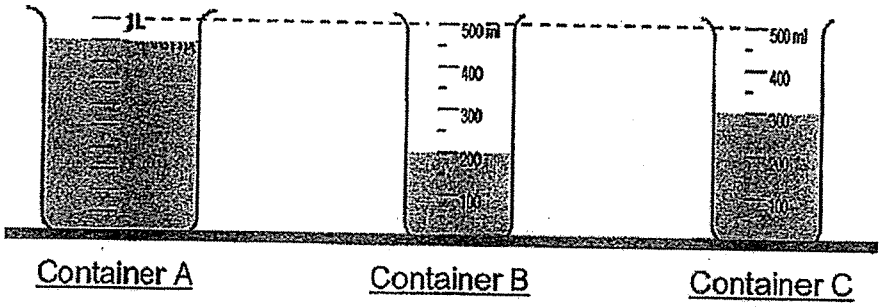
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25 Karen poured water from Container A to Containers B and C so that the height of the water in the 3 containers became the same.

Find the volume of water left in Container A.

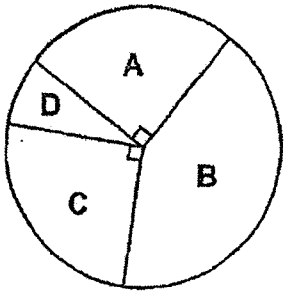
Do not write in this space.



Container A Container B Container C

Ans: _____ ml

26 The pie chart shows the grades A, B, C and D obtained by some pupils in a Mathematics test. $\frac{2}{5}$ of the pupils obtained grade B. What fraction of the pupils obtained grade D?



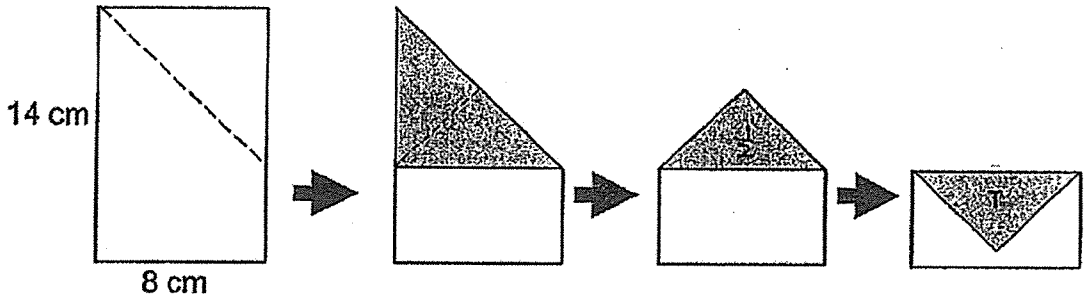
Ans: _____

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27 Joyce has a rectangular piece of paper, 8 cm by 14 cm. It is white on one side and coloured on the other side. She folds the paper along the dotted lines as shown below. Express the area of the coloured triangle T as a fraction of the area of the whole piece of paper. Give your answer in the simplest form.

Do not write in this space



Ans: _____

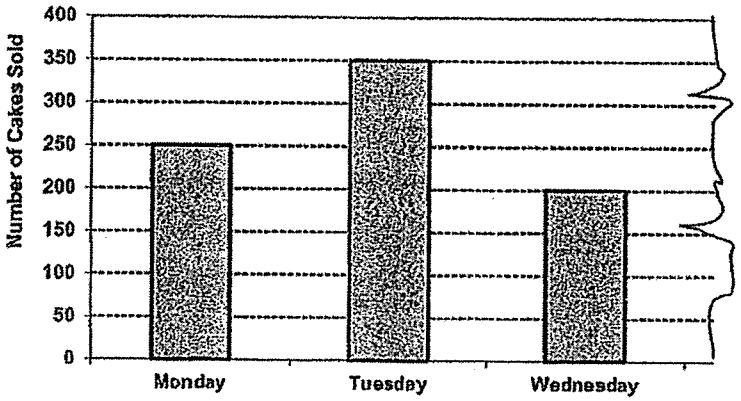
28 Joanne spent $\frac{1}{4}$ of her money on a watch and $\frac{1}{6}$ of her remaining money on a pair of shoes. She has $125.50 left. How much did the watch cost?

Ans: $_____

(Go on to the next page)

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29 The bar graph shows the number of cakes sold in a shop from Monday to Friday. Part of the bar graph was accidentally torn off. The average number of cakes sold from Monday to Tuesday was the same as the average number of cakes sold from Wednesday to Friday. What is the total number of cakes sold on Thursday and Friday?



Ans: _____

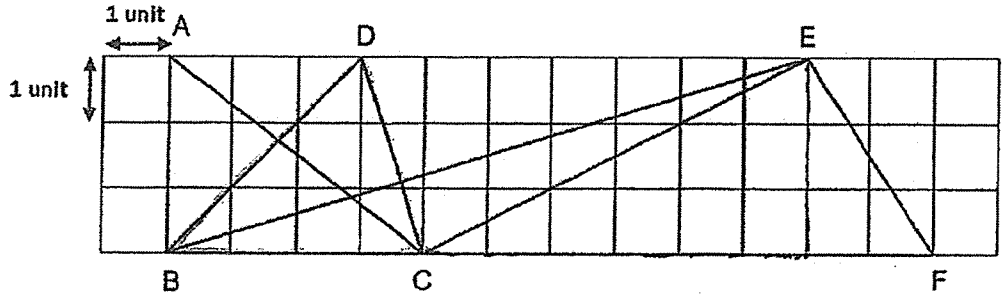
2

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30 The diagram below shows four different triangles ABC, BCD, BCE and BFE.

Do not write in this space.



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
(a) The area of ABC is 6 square units.			
(b) Twice the area of BCD is 9 square units.			
(c) The ratio of the area of BCE to the area of BFE is 1 : 3.			

END OF PAPER

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METHODIST GIRLS' SCHOOL (PRIMARY)

Founded in 1887

MID YEAR EXAMINATION 2022
PRIMARY 6
MATHEMATICS

PAPER 2

Duration: 1h 30 min

INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
Write your answers in this booklet.
The use of an approved calculator is expected, where appropriate.

Name: _____ ( )

Class: Primary 6._____

Date: 12 May 2022

Parent's Signature: _____

Paper 1 Booklet A	**/ 20**
Paper 1 Booklet B	**/ 25**
Paper 2	**/ 55**
TOTAL	**/ 100**

This booklet consists of 17 printed pages including this page.

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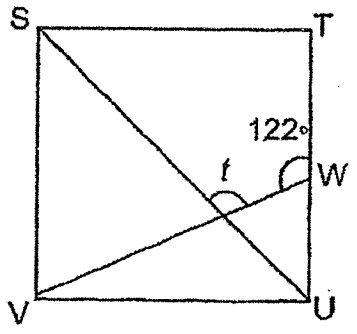
Questions **1** to **5** carry 2 mark each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

Do not write in this space

1 Kristen and Lauren had 85 stickers altogether. After Kristen gave Lauren 18 stickers, she had 21 stickers more than Lauren. How many stickers did Kristen have at first?

Ans: _____

2 STUV is a square. SU and VW are straight lines. $\angle VWT = 122°$. Find $\angle t$.



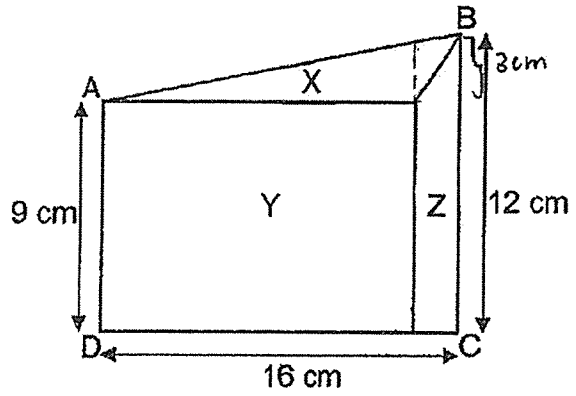
Ans: _____ °

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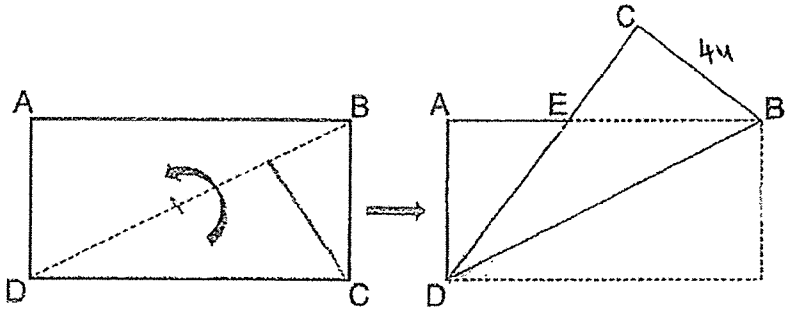
13 ABCD is made up of a triangle X, a rectangle Y and a trapezium Z as shown below. DC is a straight line. Find the area of ABCD.

Do not write in this space



Ans: _____ cm^2

4 A rectangular piece of paper was folded along its diagonal BD as shown below. DE = EB. The ratio of the AE : BE : BC is 3 : 5 : 4. Find the ratio of the area of triangle EBD to the area of triangle BCE.

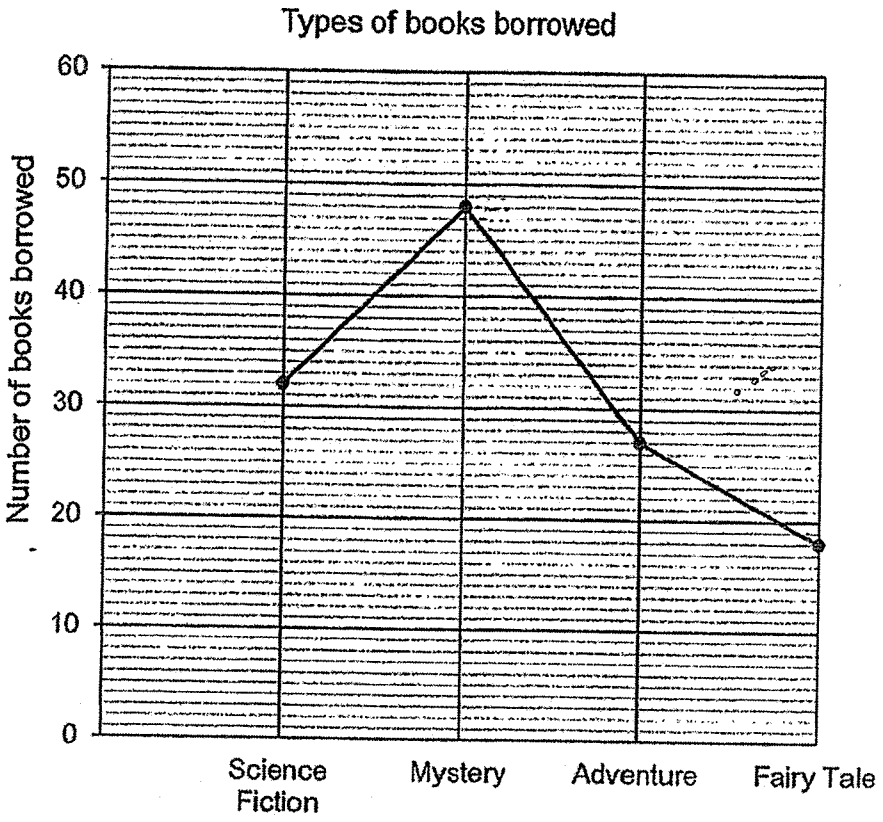


Ans: _____

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5 The graph below shows the types of books borrowed by 80 students.



Each student borrowed either 1 or 2 story books.

How many students borrowed 2 books?

Do not write in this space

Ans: _____

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For questions to 6 to 17, show your workings 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)

Do not write in this space

6 In the morning, there were 750 children at a funfair. 30% of them were girls and the rest were boys. In the afternoon, some more girls joined the funfair and the percentage of girls increased to 40% of the total number of people. How many girls joined the funfair in the afternoon?

Ans: _____ [3]

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7 Mr Tang bought some apples and oranges. Each apple cost $0.50 and each orange cost $0.40. The ratio of the number of apples bought to number of oranges bought was 5 : 2. Mr Tang spent $23.10 on all the fruits. How many apples did he buy?

Do not write in this space

Ans:_____ [3]

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8 Mrs Tan had 47 kg of soap mix. $\frac{5}{8}$ kg of soap mix was needed to make each soap bar. Mrs Tan made as many soap bars as she could. How much soap mix did she have left? Give your answer as a fraction in the simplest form.

Do not write in this space

Ans: _____ [3]

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9 The table below shows the number of pens sold in a bookstore over a period of 3 months.

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Month	March	April	May
Number of pens sold	103	94	97

(a) Find the average number of pens sold from March to May.

Ans: (a)_____ [1]

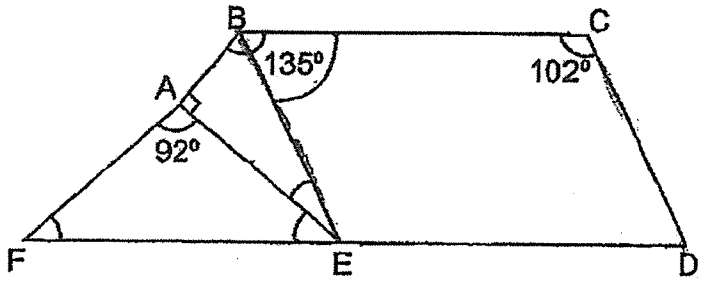
(b) The average number of pens sold from March to July was 15 more than the average number of pens sold from March to May. Write down one possible pair of values for the number of pens sold in June and July.

Ans: (b) _____and_____[2]

(Go on to the next page)

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10 AEF is an isosceles triangle, where AE = AF. ∠ABC = 135°.
ABE is a right-angled triangle and BCDE is a parallelogram. Find ∠AEB.



Do not write in this space.

Ans:_____ [3]

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11 There were 380 red and blue marbles in a jar. After $\frac{5}{8}$ of the red marbles and $\frac{1}{4}$ of the blue marbles were taken out, there were 177 marbles left in the jar. How many red marbles were there in the jar at first?

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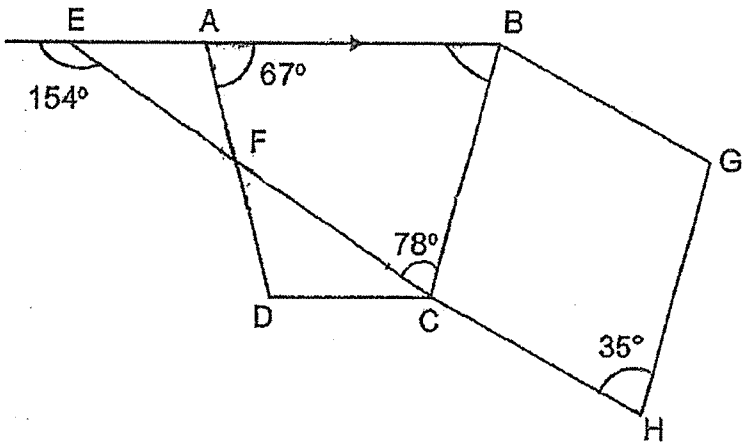
Ans: _____ [4]

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12 ABCD is a trapezium and BGHC is a rhombus. BE, AD and CE are straight lines.

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(a) Find ∠ ABG.

Ans: (a)_____ [2]

(b) Find ∠ EFD.

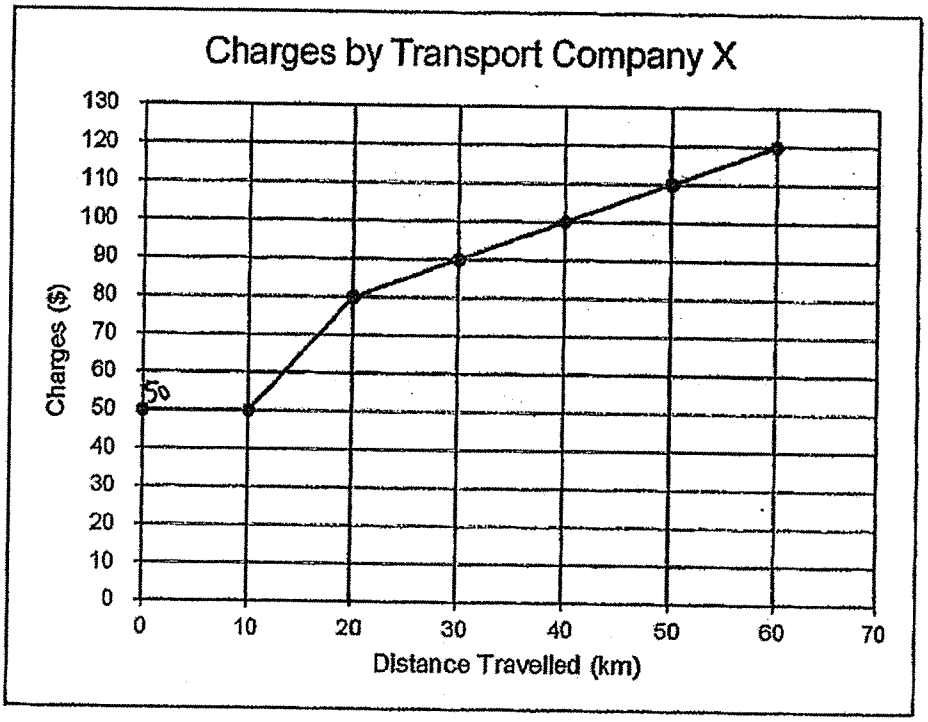
Ans: (b)_____ [2]

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13 The graph below shows the cost of hiring a mini-bus from a transport company.

Do not write in this space



(a) The distance from Town A to Town B is 6.2 km. What is the cost of hiring the bus to travel from Town A to Town B?

Ans: (a)_____ [1]

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(b) Mr Tan hired the bus to travel from Town C to Town D and back to Town C using the same route. He paid $90. What is the distance from Town C to Town D?

Do not write in this space

Ans: (b)_____ [2]

(c) How much does the company charge for every kilometre of travel after the first 20 km?

Ans: (c)_____ [1]

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14 The table below shows how a set of numbered cards is distributed among 4 boys.

Do not write in this space.

Alan	Brian	Chris	Daniel
1	2	3	4
8	7	6	5
9	10	11	12
16	15	14	13
17			

(a) Who will receive the 29th card?

Ans: (a) _____ [1]

(b) All the cards in the set are distributed. Each boy receives an equal number of cards. The numbers on the cards for each boy add up to 132. How many cards are there altogether?

Ans: (b) _____ [3]

(Go on to the next page)

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15 Joanna paid $126 for a bag after a discount of 25%.

(a) What was the price of the bag before discount?

Do not write in this space.

Ans: (a) _____ [1]

(b) She paid a discounted price of $108.80 for a pair of shoes.
The total discount for the pair of shoes and the bag was $61.20.
What was the percentage discount given for the pair of shoes?

Ans: (b) _____ [3]

(Go on to the next page)

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16 Ben had some red, blue and yellow cards. He had 156 more blue cards than red cards and $\frac{2}{3}$ as many yellow cards as red cards. He gave away $\frac{1}{3}$ of his red cards, $\frac{5}{6}$ of his blue cards and 50% of his yellow cards. In the end, he had 250 cards left.

Do not write in this space

(a) How many cards did Ben have at first?

Ans: (a)_____ [3]

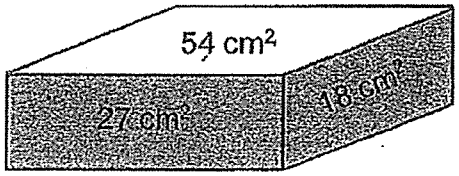
(b) How many blue cards did Ben give away?

Ans: (b)_____ [2]

(Go on to the next page)

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17 An open rectangular box is shown below.



Do not write in this space.

(a) The outside of the box including its base is painted. Find the painted area.

Ans: (a)_____ [1]

(b) The box is packed full with 1-cm cubes.

(i) What is the least number of cubes used?

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

(ii) How many cubes touch the inside of the box?

Ans: (b)(ii) _____ [2]

END OF PAPER

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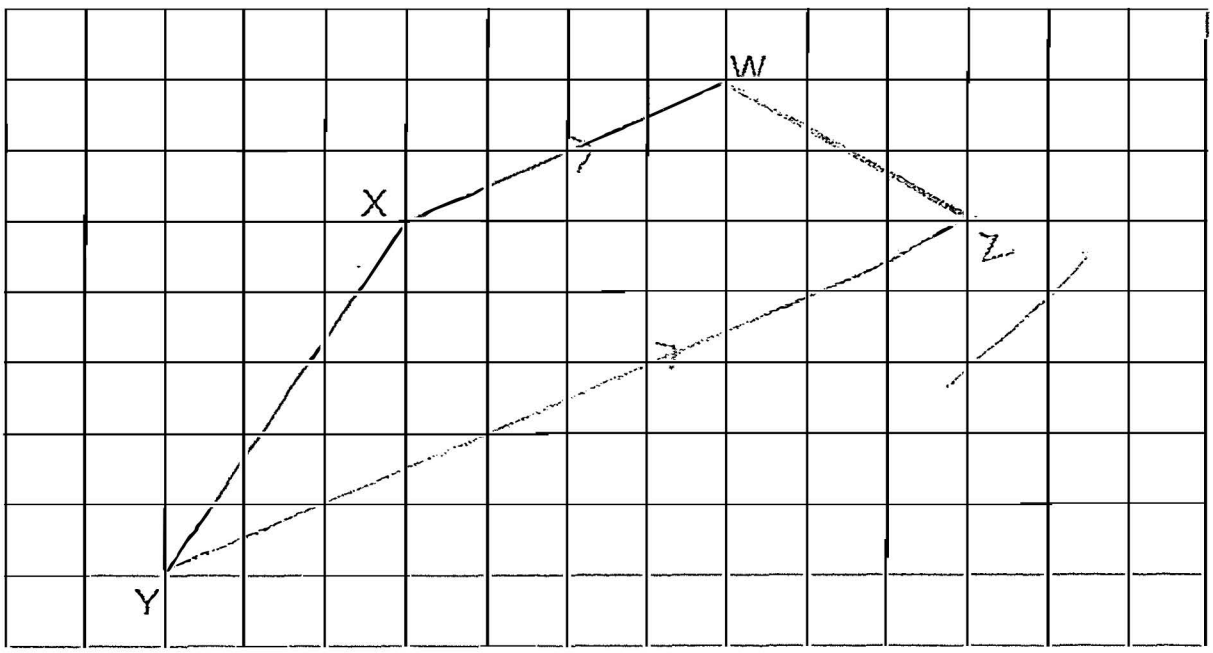
SCHOOL : MGS PRIMARY SCHOOL
LEVEL : PRIMARY 6
SUBJECT : MATH
TERM : 2022 SA1

PAPER 1 BOOKLET A

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

Q 11	Q12	Q13	Q14	Q15
1	2	1	2	4

PAPER 1 BOOKLET B

Q16)	2.75 X 5 = $13.75
Q17)	57.5 g
Q18)	5 x 24 ÷ 6 + 27 = 120 ÷ 6 + 27 = 20 + 27 = 47
Q19)	32°
Q20)	

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Q21)	6B : 45 – 36 = 9 3B : $\frac{9}{4}$ = 2R1 = 9 box
Q22)	1h + 1h + 7h + 30min + 25MIN = 9H 55 min
Q23)	9u =576 1u = $\frac{576}{9}$ = 64 4u = 64 x 4 = 256
Q24)	Volume→60 x 20 x 30 = 1200 x 30 3600 Volume now → 60 x 20 x 12 = 1200 x 12 = 14400 Needed→ 3600 – 14400 = 21600 cm3
Q25)	900 – 700 = 200 Pour 100ml to B →B has 300ml (same as C) A B C 800 300 300 700 350 350 Same level ANS: 700ml
Q26)	A + C = ¼ + ¼ = ½ ½ + $\frac{2}{5}$ = $\frac{9}{10}$ 1 - $\frac{9}{10}$ = $\frac{1}{10}$
Q27)	14 x 8 x ½ = 56 56 x ½ = 28 $\frac{28}{14 x 8}$ = ¼
Q28)	5u = 125.50 1u = $\frac{125.50}{5}$ = 25.10 2u = 25.10 x 2 = $50.20

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Q29)	Average of M + T → $\frac{350+250}{2}$ 300 Three days (W + TH + F)→300 x 3 = 900 TH + F→ 900 – 200 = 700
Q30)	a) True b) False c) True

PAPER 2

Q1)	2u = 85 – 18 – 21 + 8 = 28 1u = $\frac{28}{2}$ = 14 K → 14 + 18 + 21 + 18 = 71
Q2)	<T = 180 – 77 = 103°
Q3)	9 x 16 = 144 144 + 24 = 168 cm2
Q4)	5 : 3
Q5)	32 + 18 + 27 + 48 = 125 125 – 80 = 45
Q6)	420u = 525 1u = $\frac{525}{420}$ 1.25 280u = 280 x 1.25 = 350 350 – 225 = 125
Q7)	3.3u = 23.10 1u = $\frac{23.10}{3.3}$ = 7 5u = 7 x 5 = 35
Q8)	Most number → 47 ÷ $\frac{5}{8}$ = 75.2 Used→ 75 x $\frac{5}{8}$ = 46 $\frac{7}{8}$

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	Left → 47 - $46\frac{7}{8} = \frac{1}{8}$ kg
Q9)	a) Total → 103 = 94 + 97 = 294 Average→ $\frac{294}{3}$ = 98 b) Average in M →July → 98 + 15 = 113 Total in 5 months→ 113 x 5 = 565 June + July → 565 – 103 – 94 – 97 = 271 ANS : 100 and 271
Q10)	$\frac{180-92}{2}$ = 44° < EBC = 180° – 102° = 78° 135° – 78° = 57° <AEB = 90° – 57° = 33°
Q11)	$\frac{12}{8}$ R = 432 R = 288
Q12)	a) <ABG = 76 + 35 = 111° b) <EFD = 360 – 139 – 41 – 41 = 139°
Q13)	a)$50 b)15km c)$1
Q14)	a) 29 ÷ 4 = 7 (Daniel) b) 8 x 4 = 32
Q15)	a) 75% →126 100% → $\frac{126}{75}$ x 100 = $168 b) Discount for bag → 25% → $\frac{126}{75}$ X 25 = 42 Discount for first → 61.20 – 42 = 19.20 Shoes at first → 108.80 + 129.20 = 128 $\frac{19.2}{128}$ x 100% = 15%
Q16)	a) 7u + 26 = 250 7u = 224 1u = 32 6u + 6u + 4u + 156 = 16u + 156 = 16 x 32 + 156 = 668

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	b) 5u + 130 + 32 x 5 + 130 = 290
Q17)	a) 27 + 27 + 18 + 18 + 54 = 144cm2 b) i) 9 x 3 x 6 = 162 ii) 7 x 4 x 2 = 56 162 – 56 = 106

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