SA1 Anglo-Chinese School (Junior)

SEMESTRAL ASSESSMENT 1 (2021)

PRIMARY 6

MATHEMATICS

PAPER 1

Booklet A

Tuesday **11 May 2021** **1 h**

Name: _____ ( ) Class: 6.( )

INSTRUCTIONS TO PUPILS

1 Do not turn over the pages until you are told to do so.

2 Follow all instructions carefully.

3 Answer ALL questions.

4 Shade your answers in the Optical Answer Sheet (OAS) provided.

5 You are **not** allowed to use a calculator for this paper.

This question paper consists of 7 printed pages (inclusive of cover page).

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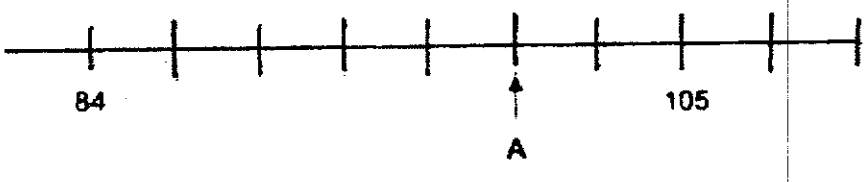
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Questions 1 to 10 carry 1 mark each. Questions 11 to 15 carry 2 marks each. For each question, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4) and shade your answer (1, 2, 3 or 4) on the Optical Answer Sheet (OAS). (20 marks)

1. In the number 103.75, which digit is in the tenths place?

1) 0
2) 5
3) 3
4) 7

2. In the number line below, what is the value of the reading at A?



1) 89
2) 94
3) 99
4) 103

3. which of the following is the most likely mass of an adult human?

1) 60 g
2) 60 kg
3) 6000 g
4) 600 kg

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4. Which one of the following fractions is smaller than $\frac{1}{4}$?

1) $\frac{1}{3}$

2) $\frac{3}{10}$

3) $\frac{3}{14}$

4) $\frac{6}{20}$

5. Express 225 minutes in hours and minutes.

1) 2 h 25 min

2) 3 h 15 min

3) 3 h 45 min

4) 4 h 25 min

6. In 2020, Country X's population, when rounded to be the nearest thousand, is 7 280 000. What is the actual population likely to be?

1) 7 278 999

2) 7 279 344

3) 7 280 499

4) 7 280 542

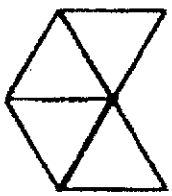
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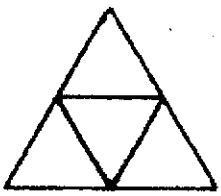
7. The table below shows the number of cups of water drank by pupils from Class 6H on a certain day. What is the total number of cups of water the pupils in Class 6H drank?

Number of cups each pupil drank	0	1	2	3	4
Number of pupils	4	10	7	13	5

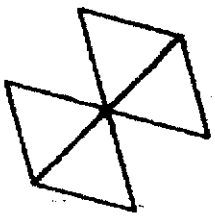
1) 10
2) 39
3) 83
4) 87

8. Each figure below is made up of equilateral triangles. Which figure does not have a line of symmetry?

1) 

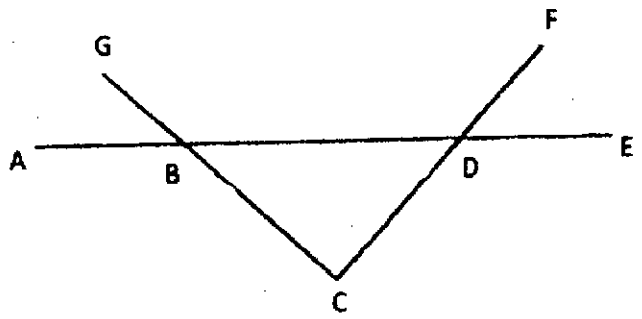
2) 

3) 

4) 

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9. The figure consists of three straight lines, AE, CG and CF. Which of these statements is true?



1) $\angle GBD = \angle FDB$
2) $\angle ABG = \angle FDE$
3) $\angle FDE + \angle BDF = 180^\circ$
4) $\angle ABC + \angle BDC = 180^\circ$

10. There were 70 girls and 80 boys in a school hall. 12 girls and 18 boys wore glasses. What percentage of children in the hall wore glasses?

1) 10%
2) 20%
3) 30%
4) 80%

11. Guo Hua's average score for his English Math Science and chinese test was 28. He scored 24 for English and 22 for Chinese. What is the sum of his Math and Science scores?

1) 33
2) 46
3) 52
4) 66

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12. **Mrs Lee bought w cups of bubble tea at $5 each. She gave the cashier $50 and used the remaining money to buy 3 donuts. What was the cost of each donut in terms of w?**

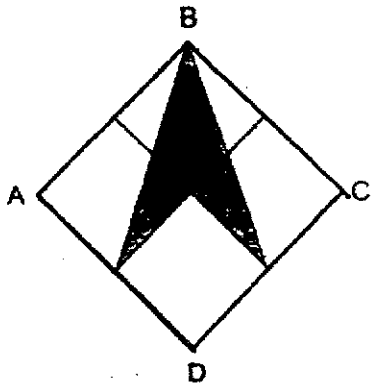
1) $\$(50 - 5w)$

2) $\$(50 - \frac{5w}{3})$

3) $\$(\frac{50 - w}{3})$

4) $\$(\frac{50 - 5w}{3})$

13. **The square ABCD below is made up of 4 similar squares, each with a length of 4 cm. What is the area of the shaded part?**



1) 8 cm^2

2) 16 cm^2

3) 32 cm^2

4) 48 cm^2

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14. At first, Adam and Ben were facing opposite directions. Then Adam turned 135° clockwise to face North. Ben turned 45° clockwise. Which direction did Ben face in the end?



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

15. Oliver bought 48 chocolate bars from the candy store. He wanted to pack all the chocolate bars equally into bags. He must have at least 3 bags of chocolate bars and at least 4 chocolate bars in each bag How many different ways can he pack his chocolate bars?

1) 4
2) 5
3) 6
4) 10

End of Booklet A

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Anglo-Chinese School (Junior)

SEMESTRAL ASSESSMENT 1 (2021)

PRIMARY 6

MATHEMATICS

PAPER 1

Booklet B

Tuesday **11 May 2021** **1 h**

Name: _____ ( ) Class: 6.( )

INSTRUCTIONS TO PUPILS

1 Do not turn over the pages until you are told to do so.

2 Follow all instructions carefully.

3 Answer ALL questions.

4 You are not allowed to use a calculator for this paper.

This question paper consists of 9 printed pages (inclusive of cover 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 to the units stated. (5 marks)

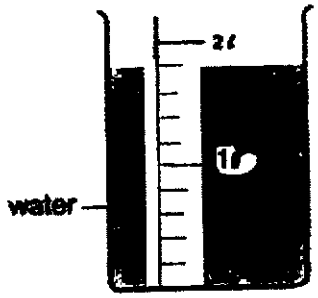
16. Write five hundred and fifty-six thousand and thirteen in numerals.

Ans : _____

17. Find the value of $8 \div \frac{6}{7}$.
Leave your answer in its simplest form.

Ans : _____

18. How much water (in ml) is in the container?

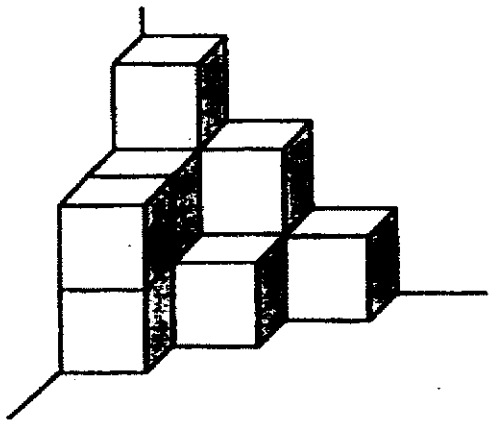


Ans : _____ ml

Sub-Total :

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19. The figure below is made up of 1-cm cubes. What is the volume of the figure?



Ans:_____cm^3

20. The ratio of the number of cars to the numbers of vans in a carpark is 16 : 12 The ratio of the number of vans to motorcyles is 1: 2 What fraction of the total number of vehicles are cars? Give your answer in the simplest from.

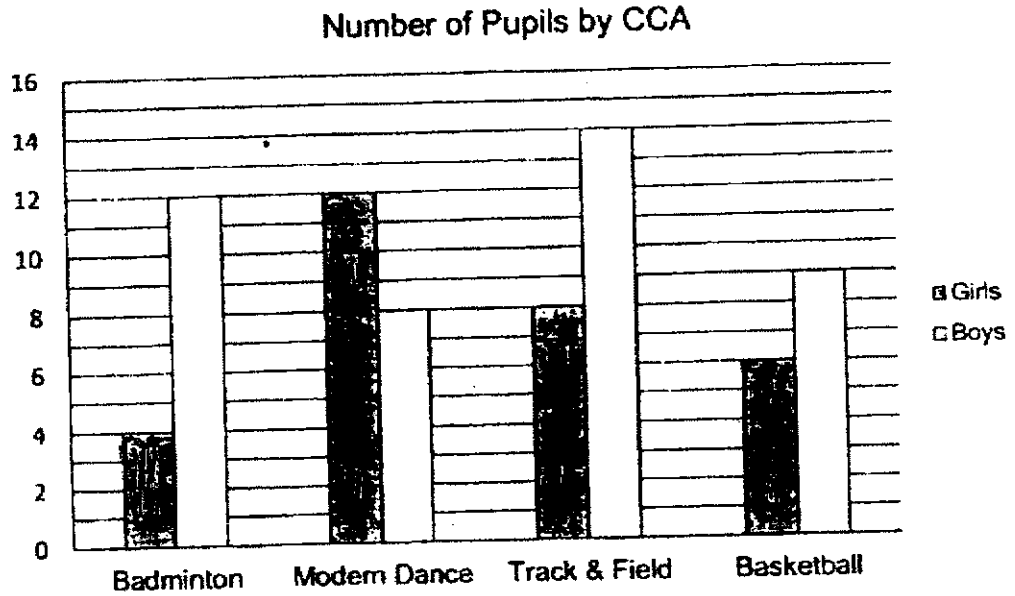
Ans : _____

Sub-Total :

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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)

21. **The bar graph shows the number of pupils who have signed up for 4 different CCAs. In which CCA is the ratio of the number of girls to the number of boys 2:3?**

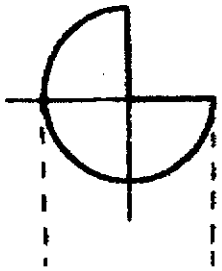


Ans : _____

Sub-Total : ☐

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22. The figure below shows a circle of diameter 14 cm, with a quadrant removed from it. What is the perimeter of the figure? (Take $\pi = \frac{22}{7}$)

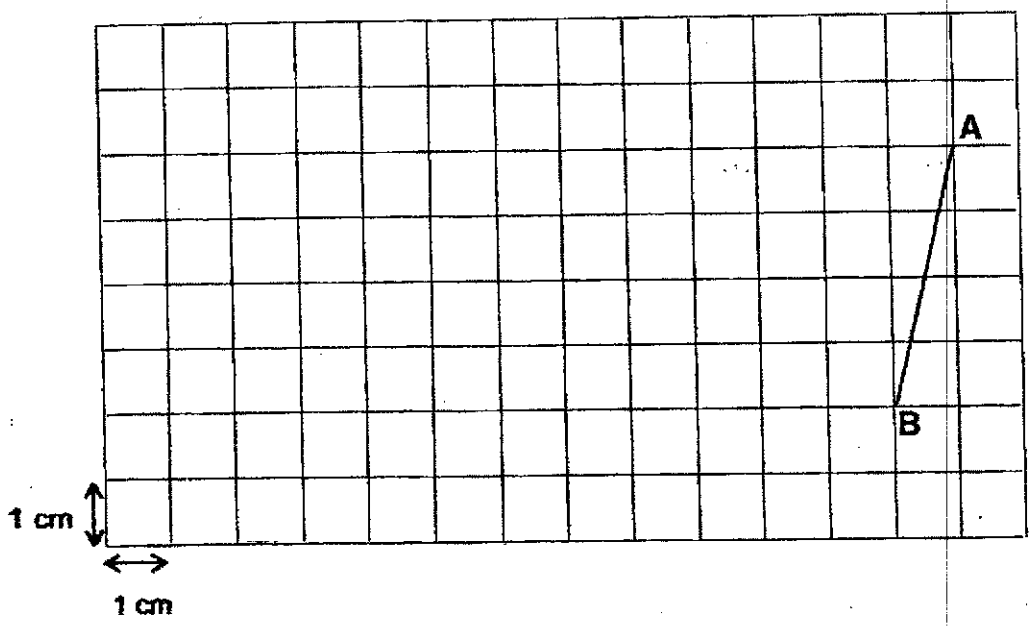


Ans: _____ cm

23. In the square grid below, AB forms one side of triangle ABC in which ∠ABC is a right angle and BC is twice the length of AB.

(a) Complete the drawing of Triangle ABC.

(b) Measure and write down the length of AC.

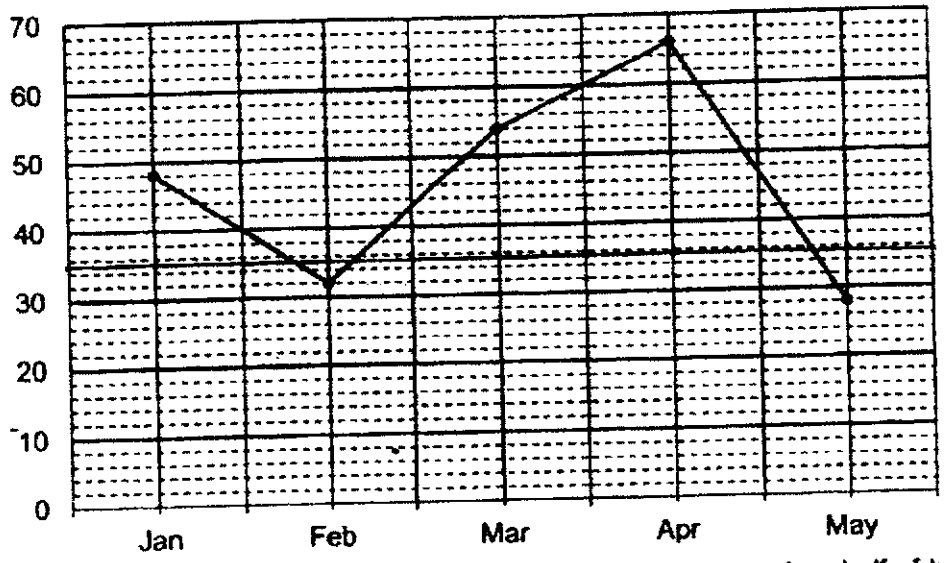


Ans: (b) _____ cm

Sub-Total :

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24. George received $70 from his father each month for his pocket money. The line graph shows the amount of money he spent each month.



Write down all the months in which George spent less than half of his pocket money.

Ans : _____

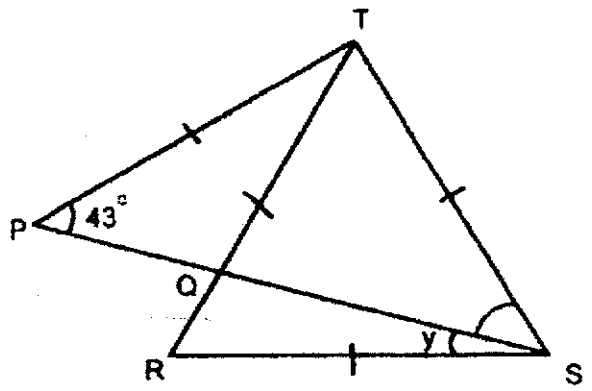
25. The ratio of Nancy's age to Mandy's age now is 5 : 1. In 12 years' time, the ratio of Nancy's age and Mandy's age will be 3 : 1. How old is Nancy now?

Ans : _____

Sub-Total : [ ]

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26. In the figure below, TRS is an equilateral triangle and PTS is an isosceles triangle. TP = TS and ∠TPQ = 43°. Find ∠y.



Ans : _____°

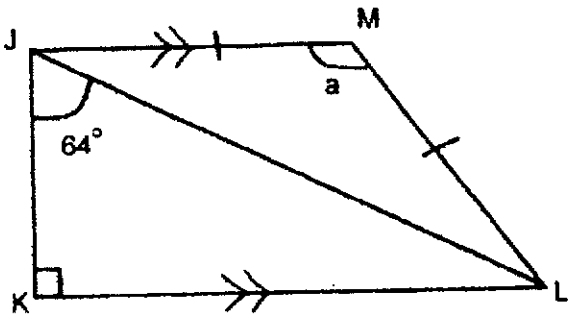
27 Darren jogged around a 400-m running track. He completed 4 rounds of the same track in 8 minutes, What was his average speed in m/min?

Ans : _____m/min

Sub-Total : [ ]

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28. **JKLM is a trapezium where JM // KL and JM = ML. Find ∠a.**



Ans : _____°

29 A group of 6 boys booked a beach volleyball court for 2 hours and took turns to play. At any time, there were 4 boys on the court. On average, how long did each boy play on the court? Give your answer in hours and minutes.

Ans : _____h_____min

Sub-Total : [ ]

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30. At first, Wei Ting had twice as many red beads as blue beads. She used $\frac{1}{2}$ of the blue beads and some red beads to make a few bracelets. In the end, she was left with $\frac{1}{4}$ of her beads. What fraction of her red beads did she use?

Ans : _____

End of Booklet B

Sub-Total :

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Anglo-Chinese School (Junior)

SEMESTRAL ASSESSMENT 1 (2021)

PRIMARY 6

MATHEMATICS

PAPER 2

Tuesday **11 May 2021** **1 h 30 min**

Name: _____ ( ) Class: 6.( ) Parent's Signature: _____

INSTRUCTIONS TO PUPILS

1 Do not turn over the pages until you are told to do so.

2 Follow all instructions carefully.

3 Answer ALL questions.

4 You can use a calculator for this paper.

Paper	Booklet	Possible Marks	Marks Obtained
1	A	20	
	B	25	
2		55	
Total		100	

This question paper consists of 16 printed pages (inclusive of cover page).

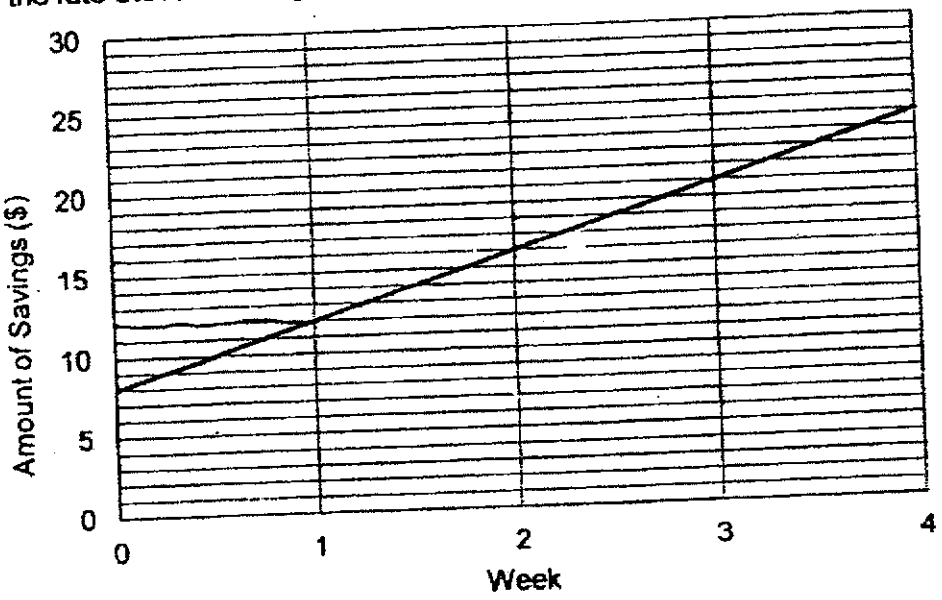
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Questions 1 to 5 carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

1. The mass of a box with 20 identical books was 17.8 kg. The mass of the same box with 12 books was 11.12 kg. What was the mass of the empty box? Give your answer in kilograms.

Ans : _____ kg

2. The line graph below shows how much money Steve saved over 4 weeks. At the rate Steve is saving, how many weeks will Steve take to save $64?

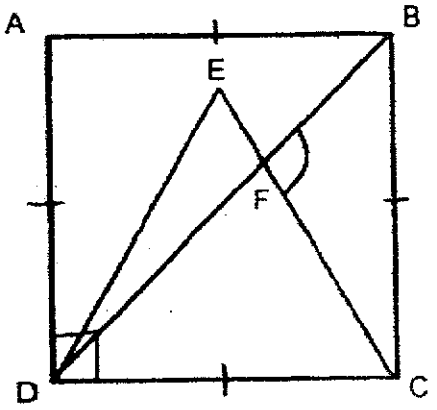


Ans : _____

Sub-Total : [ ]

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3. In the figure, ABCD is a square and CDE is an equilateral triangle. BFD is a straight line. Find ∠ BFC.



Ans : _____°

4. Damien, Wayne and Bruce shared the cost of a meal equally. Damien did not bring any money so Wayne and Bruce paid for the meal first in the ratio 11 : 7. On the next day, Damien returned $24 to Bruce. How much must he return to Wayne?

Ans : $_____

Sub-Total : [ ]

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5. Logan used a calculator to find the product of a mixed number and 6. He pressed 7 instead of 6 and obtained an answer of 64. What should the correct answer be?

Ans : _____

Sub-Total :

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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)

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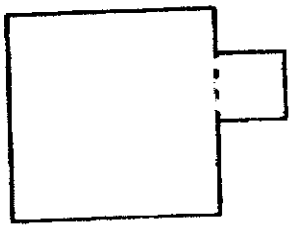
6. A bakery had 437 muffins and donuts at first. $\frac{5}{7}$ of the muffins and $\frac{1}{5}$ of the donuts were sold. There were an equal number of muffins and donuts left. How many muffins were there at the bakery at first?

Ans : _____ [3]

Sub-Total : ☐

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7. The figure below is made of 2 squares. The length of one side of the small square is y cm. The length of one side of the big square is 3 times the length of one side of the small square. The perimeter of the figure is 112 cm. Find the value of y.

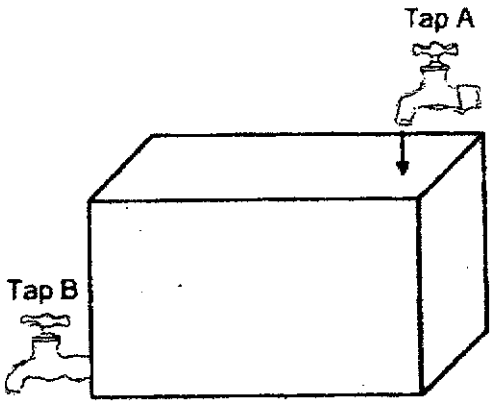


Ans : _____ [3]

Sub-Total : ☐

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8. In the figure below, Tap A fills the tank with water and Tap B drains water from the tank. Tap A takes 3 minutes to fill the tank completely. Tap B takes 5 minutes to drain all the water from the tank. The tank is empty at first. Both taps are turned on at the same time. How long will it take to fill the tank completely?

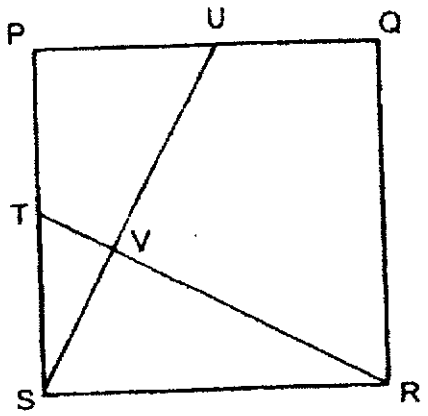


Ans : _____ [3]

Sub-Total :

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9. The figure below shows a square PQRS with an area of 400 cm^2. T is the mid-point of PS and U is the mid-point of PQ. The area of triangle STV is 32 cm^2. Find the area of the quadrilateral QRVU.



Ans : _____ [3]

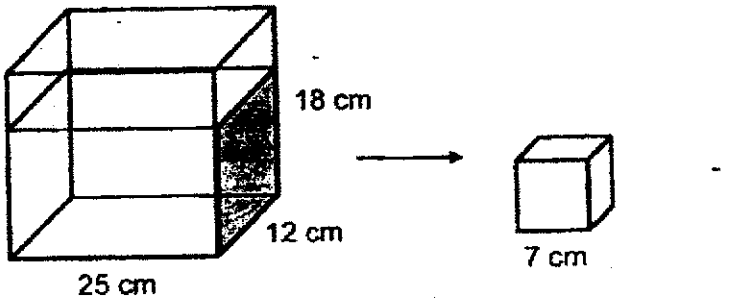
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10. A tank measuring 25 cm by 12 cm by 18 cm is $\frac{2}{3}$ filled with water. Sam poured the water from the tank into some cubical containers of edge 7 cm without spilling.

(a) What was the greatest number of cubical containers that Sam can fill completely with water?

(b) How much water was left in the tank? Give your answer in litres.



Tank **Cubical Container**

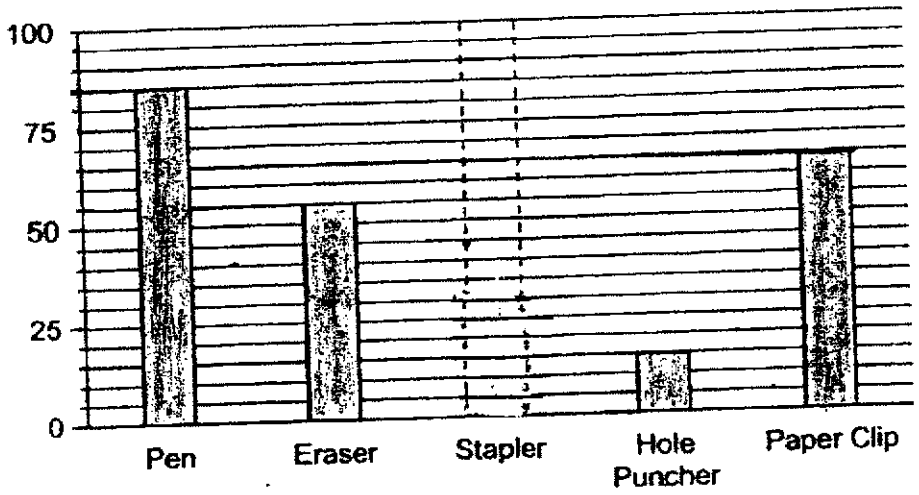
Ans : (a)_____ [2]

(b)_____ [2]

Sub-Total :

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11. The bar graph shows the number of stationery sold by a bookshop.



The table below shows the price of each of the stationery.

Stationary	Price per item
Pen	$0.70
Eraser	$1.00
Stapler	$2.50
Hole Puncher	$4.20
Paper Clip	$0.60

(a) The average number of stationery sold was 50. Draw in the bar graph for the number of staplers sold.

(b) From the sale of which stationery, did the bookshop collect the most money? What was the amount of money? Show your working clearly.

Ans : (a)_____ [2]

(b)_____ [2]

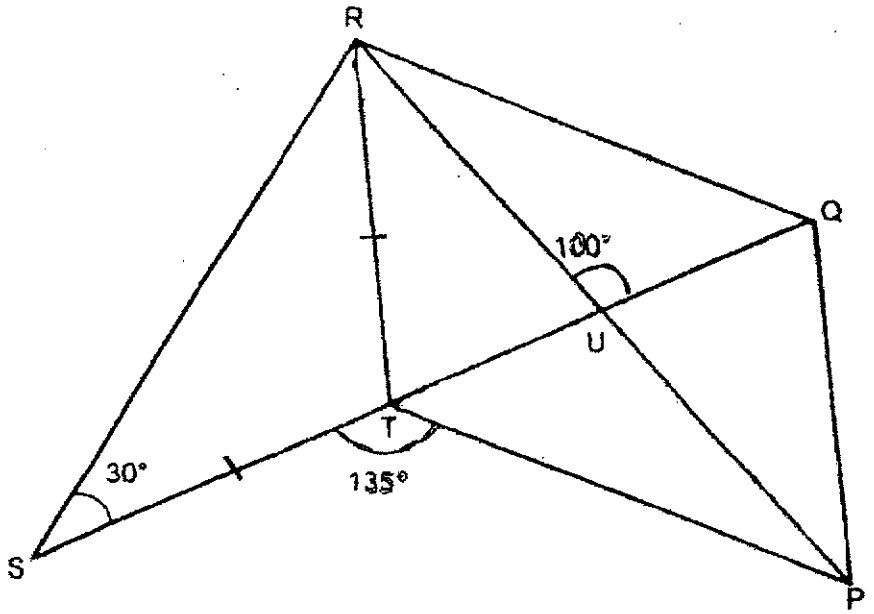
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12. In the figure, QRTP is a parallelogram. RT = TS. RP and QS are straight lines. ∠RST = 30°, ∠RUQ = 100° and ∠STP = 135°

(a) Find ∠QRT

(b) Find ∠QPU



Ans : (a)_____ [2]

(b)_____ [2]

Sub-Total :

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13. In an ant farm, the number of red ants decreased to 3612. The number of black ants increased by 42% to 5112. The total number of ants decreased by 896.

(a) What is the increase in the number of black ants?

(b) What is the percentage decrease in the total number of red ants?

Ans : (a)_____ [1]

(b)_____ [3]

Sub-Total :

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14. A piece of paper in the shape of a rhombus is folded along the dotted lines as shown in Figure 1. ∠ EWF = 80°. Find ∠ WFY.

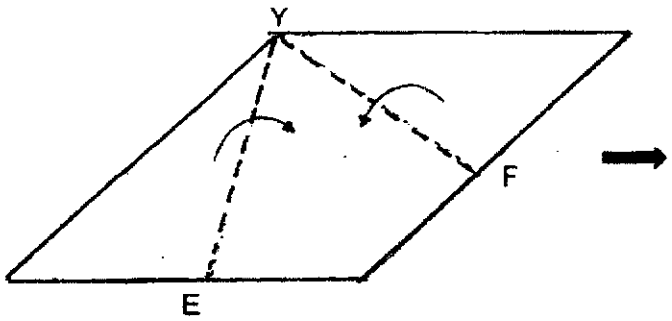


Figure 1: Before folding

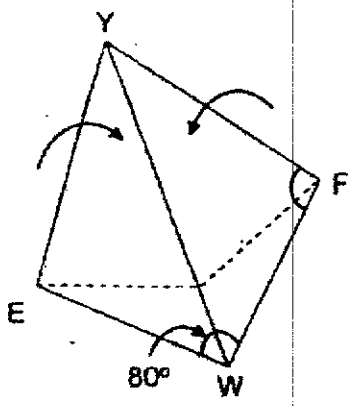


Figure 2: After folding

Ans : _____ [3]

Sub-Total :

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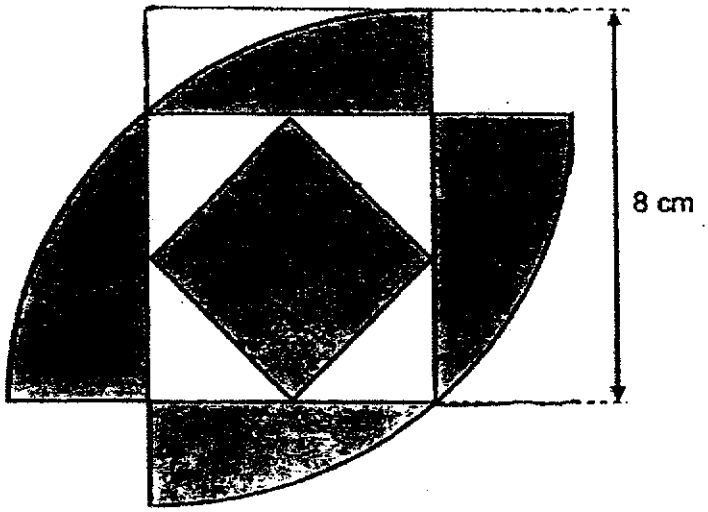
15. At a fruit stall, mangoes were sold at 3 for $10 and avocadoes were sold at 4 for $9. Mrs Sammy bought an equal number of mangoes and avocadoes. She paid $335 in total for the mangoes and avocadoes. How many mangoes and avocadoes did she buy altogether?

Ans : _____ [4]

Sub-Total : ☐

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16. The figure is formed using two identical quadrants of radius 8 cm and 2 squares. Find the total area of the **shaded** parts. (Take $\pi = 3.14$)



Ans : _____ [5]

Sub-Total : ☐

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17. The first four figures of a pattern are shown below.

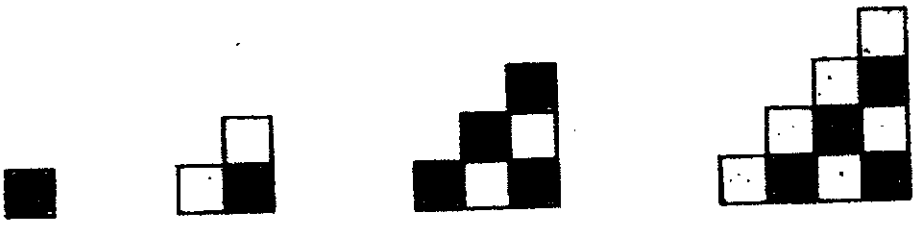


Figure 1 Figure 2 Figure 3 Figure 4

Figure	No. of grey squares	No. of white squares
1	1	0
2	1	2
3	4	2
4	4	6
5		

[1]

(a) Fill in the table for Figure 5.

(b) Find the total number of white and grey squares in Figure 120.

(c) In Figure 120, what fraction of the squares are white? Give your answer in the simplest form.

Ans : (b)_____ [2]

(c)_____ [2]

End of Paper 2

Sub-Total :

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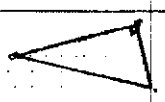
ANSWER KEY

YEAR : 2021
LEVEL : PRIMARY 6
SCHOOL : ACS (JUNIOR)
SUBJECT : MATHEMATICS
TERM : MID-YEAR EXAM

BOOKLET A (PAPER 1)

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

BOOKLET B (PAPER 1)

Q16	556013	Q17	$\frac{8}{1} \div \frac{6}{7} = \frac{8}{1} \times \frac{7}{6} = \frac{28}{3} = 9\frac{1}{3}$
Q18	1L = 1000ml 0.8L = 800ml Total = 1000 + 800 = 1800ml	Q19	11cm3
Q20	$\frac{16}{16+12+24} = \frac{16}{52}$ $= \frac{8}{26} = \frac{4}{13}$	Q21	Basketball
Q22	Perimeter = πxD = $\frac{22}{7}$ x 14 = 44 44 ÷4 x 3 = 33 Total = 33 +(Rx2)=33+ 14= 47cm	Q23	 a) b) 9.3cm
Q24	70÷2=35 ANS : Feb and May	Q25	6u-5u=1u 1u = 12 5u = 12 x 5 = 60 years old
Q26	< TSR = 180° ÷3 = 60° < TPS = < TSP 43° = 43° < y = 60° - 43° = 17°	Q27	1 round = 400m 4 round = 1600m S=$\frac{D}{T}$ =$\frac{1600}{8}$ = 200m/min
Q28	90 + 64 = 154 < LJM = 180° - 154° = 26° 26 x 2 = 52 < a = 180° - 52° = 128°	Q29	2h = 60min x 2 = 120min 120min ÷ 3 = 40min 40min x 2 = 80min =1h 20min
Q30	$\frac{7}{8}$ red beads		

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PAPER 2

Q1

20 – 12 = 8

8 books=17.8kg–11.12kg =6.68kg

12 books =6.68kg÷8x12=10.02kg

1 box = 11.12kg – 10.02kg =1.1kg

Q2

14 weeks

Q3

< ECD = 180° ÷3 = 60°

< FDC = $\frac{90}{2}$ =45°

45° x 2 = 90°

< DCB = 180° - 90° = 90°

< FCB = 90° - 60° = 30°

< FBC = $\frac{90}{2}$ = 45°

45° + 30° = 75°

< BFC = 180° - 75° = 105°

Q4

7u – 6u = 1u

1u = 24

11u – 6u = 5u

5u = 24 x 5 = $120

Q5

64 ÷ 7 = $9\frac{1}{7}$ (mixed number)

$9\frac{1}{7}$ x 6 = $54\frac{6}{7}$

Q6

14p + 5p = 19p

19p = 437

1p = 437 ÷ 19 = 23

14p = 23 x 14 = 322

Q7

14y = 112 cm

Y = 112 ÷ 14 = 8cm

Q8

	Tanks	Time	Rate
A	1	3	$\frac{1}{3}$
B	1	5	$\frac{1}{5}$
A + B	2	15	$\frac{1}{3} + \frac{1}{5} = \frac{2}{15}$

ANS : 7min 30 sec

Q9

PUS = $\frac{1}{2}$ x 20 x 10 = 100

TSR = $\frac{1}{2}$ x 20 x 10 = 100

100 x 2 = 200

200 – 32 = 168

ANS: 400 – 168 = 232cm2

Q10

Volume of tank=25x12x18=5400

Volume of water=5400x$\frac{2}{3}$ = 3600

7^3 = 343

3600 ÷ 343 = 10R170

170ml = 0.17l

a) 10 cubical container

b) 0.17l

Q11

a) 50 x 6 = 250

85 + 55 + 15 + 65 = 220

250 – 220 = 30

b) Stapler , $75

S = 30 x 2.50 = 75

Q12

a) 30 °x 2 = 60°

180 °– 60 °= 120°

360 °– 135° = 225 °

225° – 120° = 105°

180° – 105° = 75°

b) 180° - 135° = 45°

180° - 100° - 45° = 35°

75° - 35° = 40°

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Q13	a) BA before = 5112÷142x100=3600 5112 – 3600 = 1512 b) 9620 – 3600 = 6020 6020 – 3612 = 2408 $\frac{2408}{6020}$ x 100 = 40%	Q14	80 ÷ 2 = 40 40 x 2 = 80 $\frac{360-80}{2}$ = 140 140 ÷ 4 = 35 35° + 40° = 75° 180° - 75° = 105°
Q15	27 + 40 = 67 335 ÷67 = 5 (sets) 1 set = 12 + 12 = 24 5 x 24 = 120 Check → 120 ÷ 2 = 60 ANS : 120 mangoes and avocadoes	Q16	$\frac{3.14 \times 8^2}{4}$ = 50.24 $\frac{1}{2}$ x 8 x 4 = 16 16 x 2 = 32 (50.24 – 32) x2 = 36.48 16 ÷ 8 x 4 = 8 8 x 2 = 16 36.48 + 16 = 52.48cm2
Q17	a) Grey squares : 9 White squares : 6 b) Figure 120 = 120 + 1 = 121 120 ÷ 2 = 60 60 x 121 = 7260 c) Black = 120 ÷2 = 60 60 ÷ 2 = 30 30 x 30 = 900 black White = 7260 – 900 =6360 Fraction = $\frac{213}{242}$		

2ND

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