Anglo-Chinese School (Junior)

PRELIMINARY EXAMINATION (2022)

PRIMARY 6

MATHEMATICS

PAPER 1

Booklet A

Friday **19 August 2022** **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 8 printed pages (inclusive of cover page).

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. Express 12 tenths as a decimal.

   1) 0.012
   2) 0.12
   3) 1.2
   4) 12.0

2. Round 51 872 to the nearest thousand.

   1) 50 000
   2) 51 000
   3) 51 900
   4) 52 000

3. Find the value of $\frac{4}{5} \div 2$.

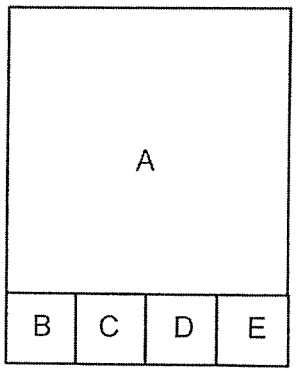
   1) $\frac{5}{8}$
   2) $\frac{2}{5}$
   3) $1\frac{3}{5}$
   4) $2\frac{1}{2}$

4. The average length of Ribbon A and B is 48 cm. The total length of Ribbon C and D is 56 cm. What is the average length of the 4 pieces of ribbon?

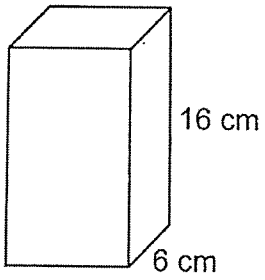
1) 26 cm
2) 38 cm
3) 52 cm
4) 76 cm

5. The figure is made up of 5 squares A, B, C, D and E. What fraction of the figure is Square D?

1) $\frac{1}{4}$
2) $\frac{1}{16}$
3) $\frac{1}{19}$
4) $\frac{1}{20}$

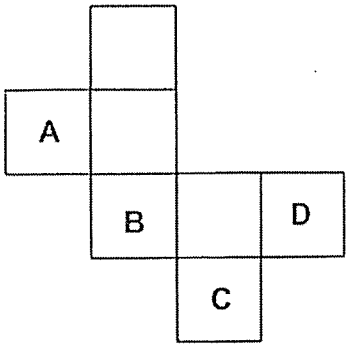


6. What is the volume of a cuboid that has a square base of side 6 cm and height 16 cm?



1) 96 cm^3
2) 216 cm^3
3) 576 cm^3
4) 1536 cm^3

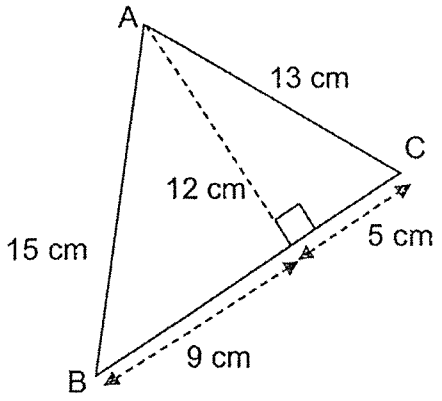
7. Kenny wanted to fold the net below to form a cube. However, he realised that the net is incorrect. He has to remove one of the faces, A, B, C or D, from it to form the cube.



Which of the following letters representing the face that he has to remove from the net?

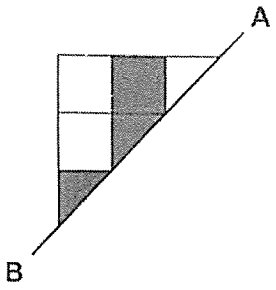
1) A
2) B
3) C
4) D

8. Find the area of triangle ABC shown below.



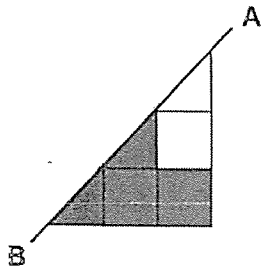
1) 30 cm^2
2) 65 cm^2
3) 84 cm^2
4) 90 cm^2

9.

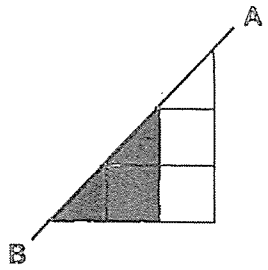


Half of a symmetric figure is shown above. AB is the line of symmetry. Which of the following completes the symmetric figure?

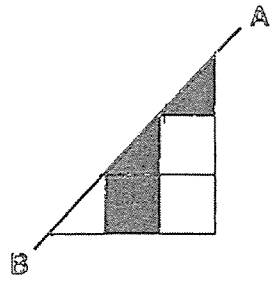
1)



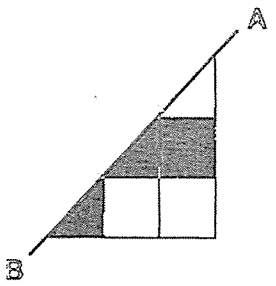
2)



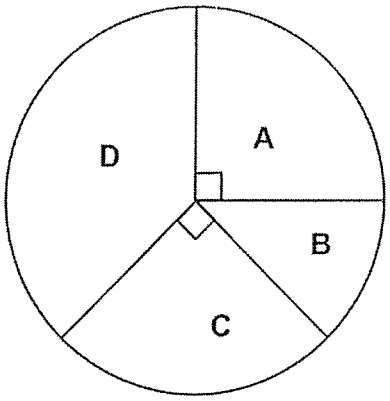
3)



4)



10. The pie chart shows the number of four types of buns sold by a shop in a day.



Which of the following tables below best represents the information in the pie chart?

1)

Types of buns	Number of buns sold
A	60
B	90
C	90
D	120

2)

Types of buns	Number of buns sold
A	90
B	120
C	90
D	60

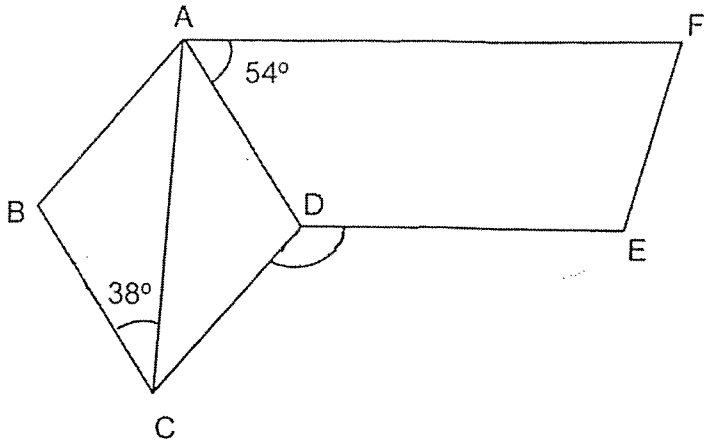
3)

Types of buns	Number of buns sold
A	80
B	40
C	80
D	70

4)

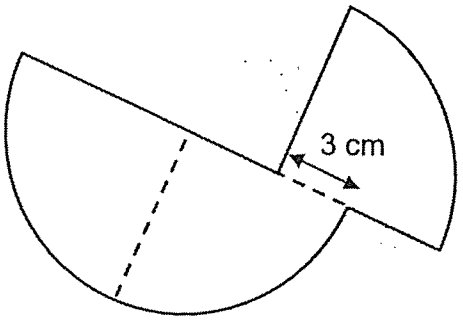
Types of buns	Number of buns sold
A	80
B	40
C	80
D	120

11. In the figure below, ABCD is a rhombus and ADEF is a trapezium. AF is parallel to DE. $\angle BCA = 38^\circ$ and $\angle DAF = 54^\circ$. Find $\angle CDE$.



1) 92°
2) 120°
3) 130°
4) 163°

12. The figure below is made up of three quarter circles of radius 7 cm. Find the perimeter of the figure. Take $\pi = \frac{22}{7}$.



1) 36 cm
2) 47 cm
3) 55 cm
4) 66 cm

13. Joshua used a calculator to multiply a 4-digit number by a 1-digit number. For the 1-digit number, he mistakenly pressed 2 instead of 3. He got the incorrect answer of 4296. What should the correct answer be?

1) 1432
2) 2148
3) 2864
4) 6444

14. There are red, blue and yellow pens in a box. The ratio of the number of red pens to blue pens is 2 : 3. The ratio of the number of yellow pens to the total number of red and blue pens is 5 : 6. What fraction of the pens in the box are blue pens?

1) $\frac{3}{5}$
2) $\frac{3}{11}$
3) $\frac{18}{55}$
4) $\frac{18}{67}$

15. A van travelled 240 km at a speed of 80 km/h. A car took $\frac{1}{2}$ h less than the van to travel the same distance. How long did the car take to cover the same distance?

1) $\frac{1}{3}$ h
2) $2\frac{1}{2}$ h
3) 3 h
4) $3\frac{1}{2}$ h

End of Booklet A

ACSJ

Anglo-Chinese School (Junior)

PRELIMINARY EXAMINATION (2022)

PRIMARY 6

MATHEMATICS

PAPER 1

Booklet B

Friday **19 August 2022** **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. Use a dark blue or black ballpoint pen to write your answers in the space provided for each question.
5. Do not use correction fluid/tape or highlighter.
6. The use of calculators is **NOT** allowed.

This question paper consists of 10 printed pages (inclusive of cover page).

Please do not write in the margin.

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. (10 marks)

16. Find the value of $98 - 3 \times (17 - 3)$.

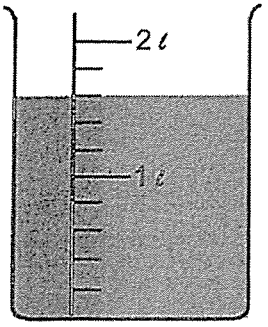
Ans : _____

17. Find the value of $70 + \frac{7}{10} + \frac{7}{1000}$.

Give your answer as a decimal.

Ans : _____

18. How much water is in the container? Give your answer in millilitres.



_____

_____

Ans : _____ mℓ

Sub-Total :

ACSJ

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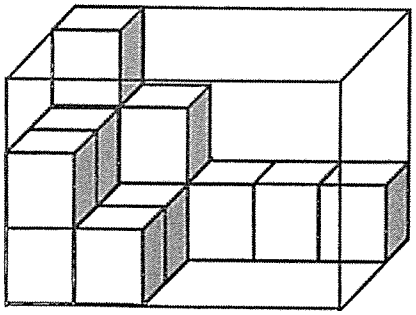
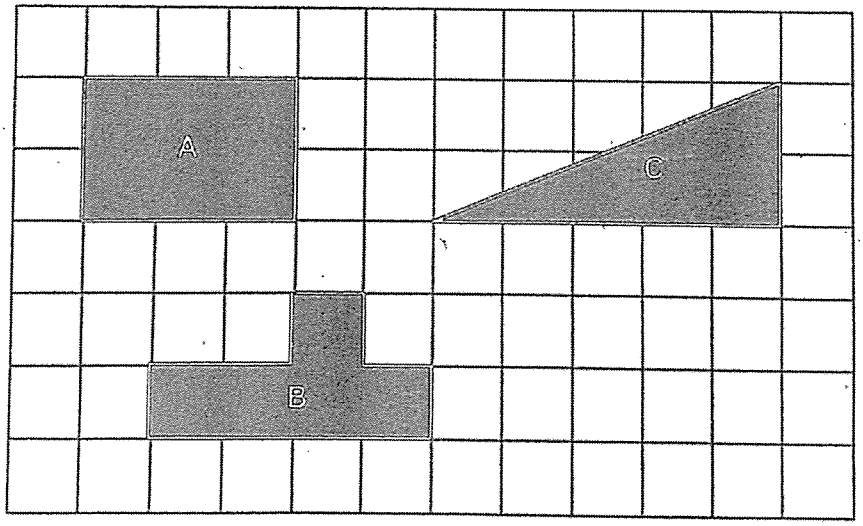
19. The figure shows a rectangular glass box partly filled with unit cubes. When the box is completely filled with unit cubes, how many unit cubes are there altogether?



Ans : _____

20. There are 3 shapes A, B and C drawn in a grid. Which two shapes have the same area?



Ans : _____ and _____

Sub-Total :

ACSJ

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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 requires units, give your answers in the units stated. (20 marks)

21. (a) Express y +11+ 7y - 9 – 3y in the simplest form.

Ans : (a)_____

(b) Find the value of $3w + \frac{w}{5}$ when w = 8.

Ans : (b)_____

22. Jamie paid $63 for a bag and 2 pencil cases. The price of a pencil case was $\frac{2}{5}$ the price of the bag. How much did Jamie pay for the bag?

Ans : $_____

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Sub-Total :

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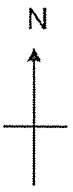
23. The square grid below shows the plan of the amenities in a condominium.

	Swimming Pool			
Cafe		Playground		
				Fitness Corner
	Multi-Purpose Hall			



(a) In what direction is the fitness corner from the playground?

Ans : (a)_____

(b) The management committee wants to place a chess table in the condominium. The location of the chess table is to be south of the cafe and north-west of the multi-purpose hall. Put a tick (√) in the square where the chess table will be placed.

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ACSJ

Sub-Total :

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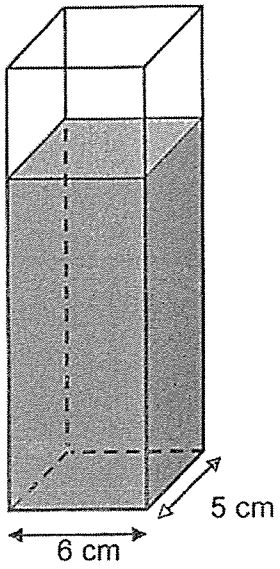
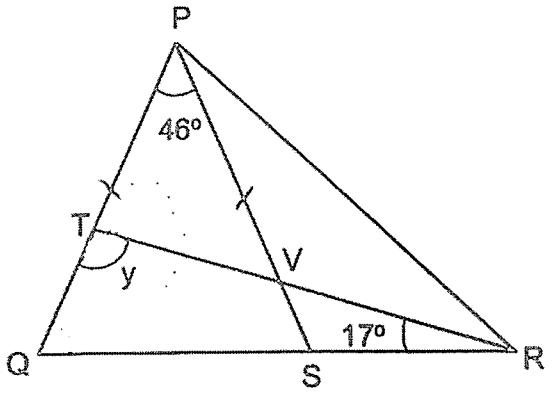
24. A rectangular tank, 6 cm long and 5 cm wide, is $\frac{4}{5}$ filled with water. It contains 600 mℓ of water. Find the height of the tank.



Ans : _____cm

25. In the figure, PQS is an isosceles triangle. PVS, QSR and TVR are straight lines and PQ = PS. ∠QPS = 46° and ∠TRQ = 17°. Find ∠y.



Ans : _____°

Sub-Total :

ACSJ

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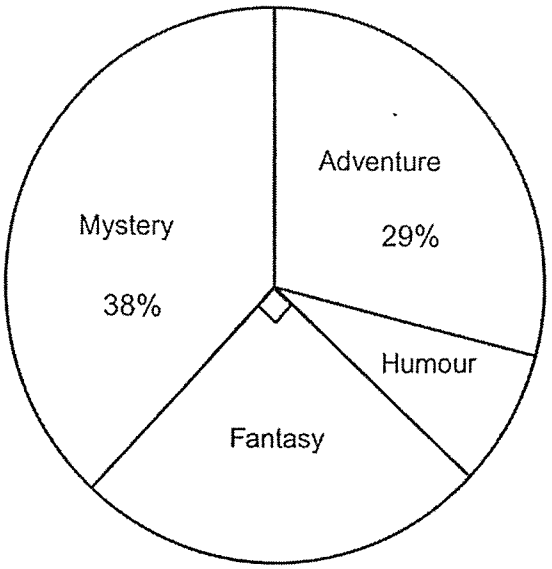
26. Books in a school library are grouped according to the following four types: Humour, Fantasy, Adventure and Mystery. The pie chart represents the number of books of each type in the school library.



There are 150 more books of the Mystery type than books of the Humour type in the school library. How many books of the Adventure type are there?

Ans : _____

Sub-Total :

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ACSJ

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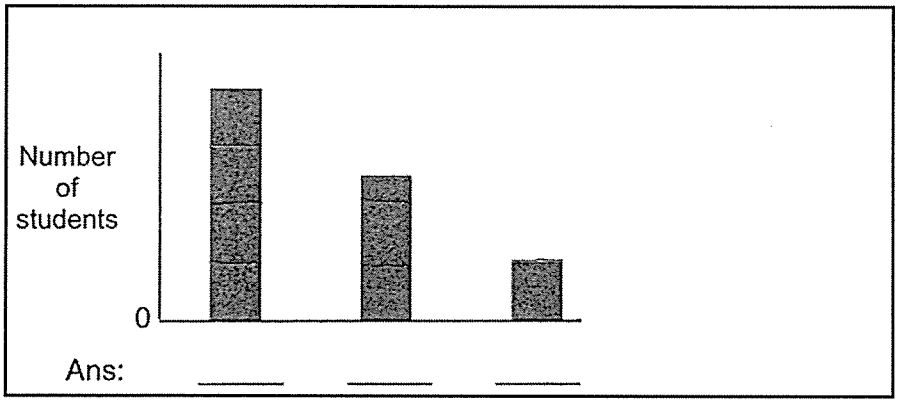
27. Students joined only one co-curricular activity (CCA) in school – art club, rugby or swimming. $\frac{1}{3}$ of them joined swimming. The number of students who joined art club was $\frac{1}{4}$ of the number who joined rugby.

The bar graph represents the number of students who joined each CCA. Label the bar graph by writing **R** for rugby, **A** for art club and **S** for swimming in the blanks below.



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ACSJ

Sub-Total :

ACSJ

30. Jonathan was given a fixed amount of pocket money each month. In July, he spent $80 and saved the rest. In August, he spent 10% less and his savings increased by 20%. How much was Jonathan's pocket money for each month?

Ans : $_____

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ACSJ

End of Booklet B

Sub-Total :

ACSJ

Anglo-Chinese School (Junior)

PRELIMINARY EXAMINATION (2022)

PRIMARY 6
MATHEMATICS
PAPER 2

Friday **19 August 2022** **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. Use a dark blue or black ballpoint pen to write your answers in the space provided for each question.
5. Do not use correction fluid/tape or highlighter.
6. The use of an approved calculator is allowed.

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

This question paper consists of 17 printed pages (inclusive of cover page).

Please do not write in the margin.

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 ratio of the number of curry puffs to the number of tuna puffs in a pastry shop was 7 : 4 at first. After 26 curry puffs were sold, the ratio of the number of curry puffs to the number of tuna puffs became 3 : 2. What was the total number of curry puffs and tuna puffs in the pastry shop at first?

Ans : _____

2. Figure P is a rectangular strip of paper. Xander cut out exactly 7 identical squares from the whole strip of paper and formed Figure Q as shown below. The perimeter of Figure Q is 210 cm. Find the perimeter of the strip of paper.

Figure P

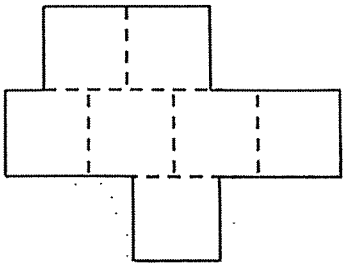

Figure Q

Ans : _____cm

Sub-Total :

ACSJ

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ACSJ

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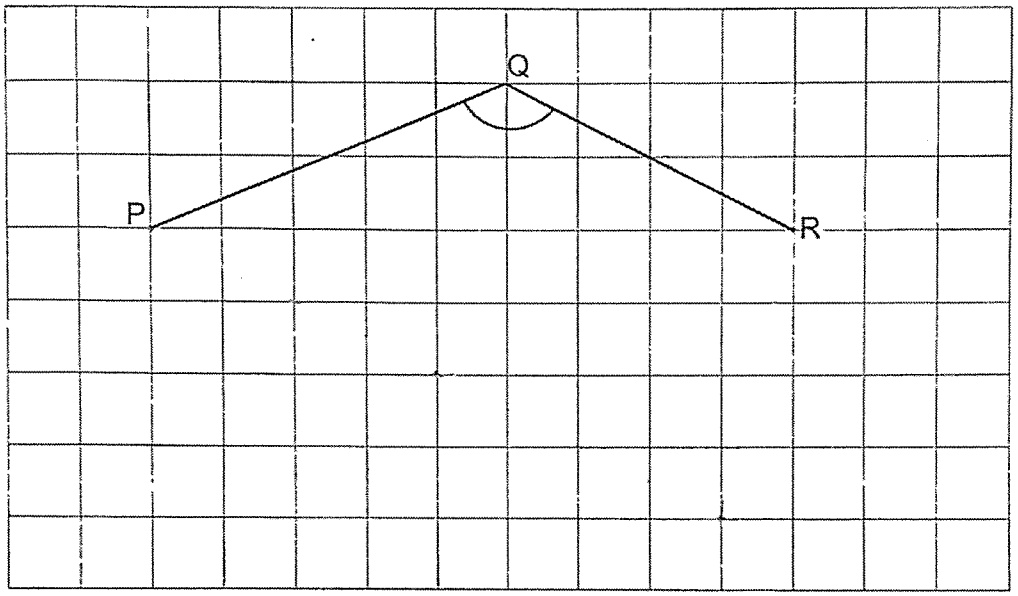
3. In the square grid below, PQ and QR are straight lines.

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

(b) PQ and QR are two sides of a trapezium PQRS in which QR is parallel to PS and PS is twice the length of QR. Complete the trapezium PQRS by drawing the other two sides in the square grid below.



Ans : (a)_____°

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ACSJ

Sub-Total :

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4. Miss Koh had a bag of flour. She used an equal amount of flour each day to bake bread. At the end of 8th day, $\frac{2}{5}$ of the flour was left. At the end of 10th day, the amount of flour left was 1.2 kg. How many kilograms of flour did Miss Koh have at first?

Ans : _____kg

5. A player has to play a total of four games in Round 1 of a competition. The scores for Ahmad's first three games are shown below.

Round 1				
Game	1st	2nd	3rd	4th
Score	31	26	28	?

Ahmad will qualify for Round 2 if his average score for three of the four games is 32 or more. What is the lowest score Ahmad must get in the 4th game to qualify for Round 2?

Ans : _____

Sub-Total :

ACSJ

Please do not write in the margin.

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)

6. Gerald, Leon and Ali went for a jog. Gerald ran y km. Leon ran 3 km more than Gerald. Ali ran twice as far as Leon.

(a) Express the total distance the three boys ran in terms of y.

Ans : (a)_____

(b) The three boys ran a total of 53 km. Find the value of y.

Ans : (b)_____ [2]

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Please do not write in the margin.

ACSJ

Sub-Total :

ACSJ

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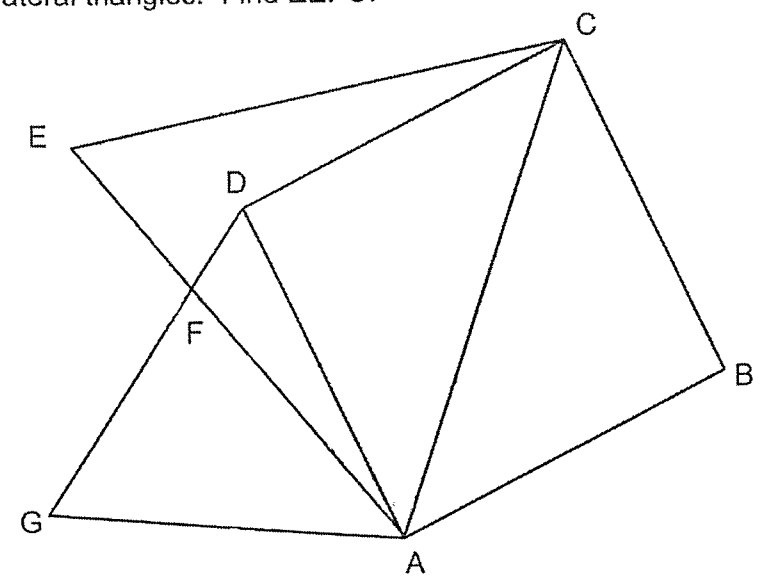
7. In the figure, not drawn to scale, ABCD is a square. ACE and DGA are equilateral triangles. Find ∠EFG.



Ans : _____ [3]

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ACSJ

Sub-Total :

ACSJ

8. Four children played a game during recess. They had to throw as many balls into a basket within a given time. 3 points were awarded for throwing each ball into the basket and 1 point was deducted for each ball missed. The table shows the number of balls thrown into the basket and missed by three of the students.

Student	Number of balls	
	Thrown into basket	Missed
A	30	8
B	29	4
C	32	16

(a) Which of the three students scored the most number of points? What was the student's points?

Ans : (a) student :_____

Points: _____ [1]

(b) Student D threw the same number of balls as Student A but obtained 16 points more. How many balls did student D toss into the basket?

Ans : (b) _____ [2]

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Please do not write in the margin.

ACSJ

Sub-Total :

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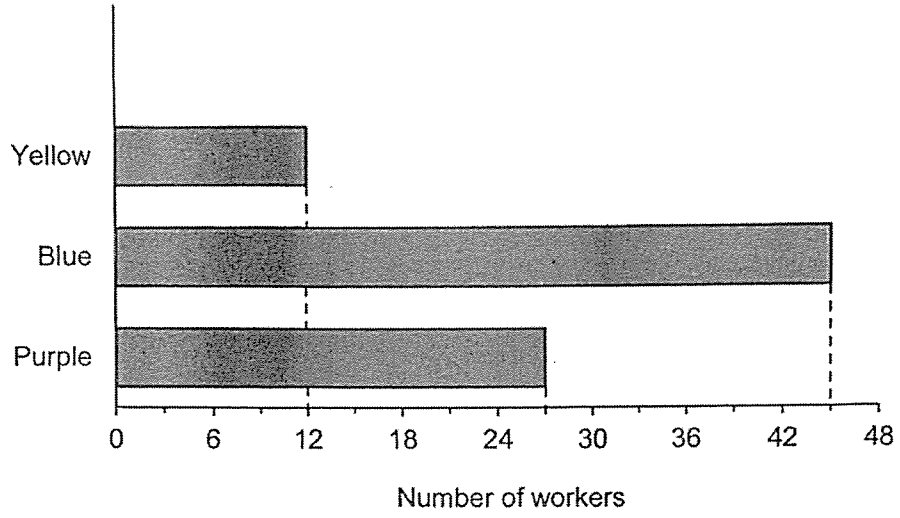
9. Mr Fam wanted to buy T-shirts for his workers. He asked them to choose one colour from yellow, blue and purple for the T-shirt. The results are shown in the graph below.



(a) How many workers were there altogether?

Ans : _____ [1]

(b) Mr Fam paid a total of $384 for the Tshirts. The ~~costs~~ prices of Yellow, Blue and Purple T-shirts were in the ratio of 2 : 1 : 1. How much did Mr Fam pay for all the Purple T-shirts?

Ans : _____ [2]

Sub-Total :

ACSJ

Please do not write in the margin.

ACSJ

10. Ron and Harry started running in opposite directions on a running trail. Ron ran at a speed of 110 m/min. At the end of 15 minutes, they were 3525 m apart. Find Harry's running speed in m/min.

Ans : _____ [3]

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Please do not write in the margin.

ACSJ

Sub-Total :

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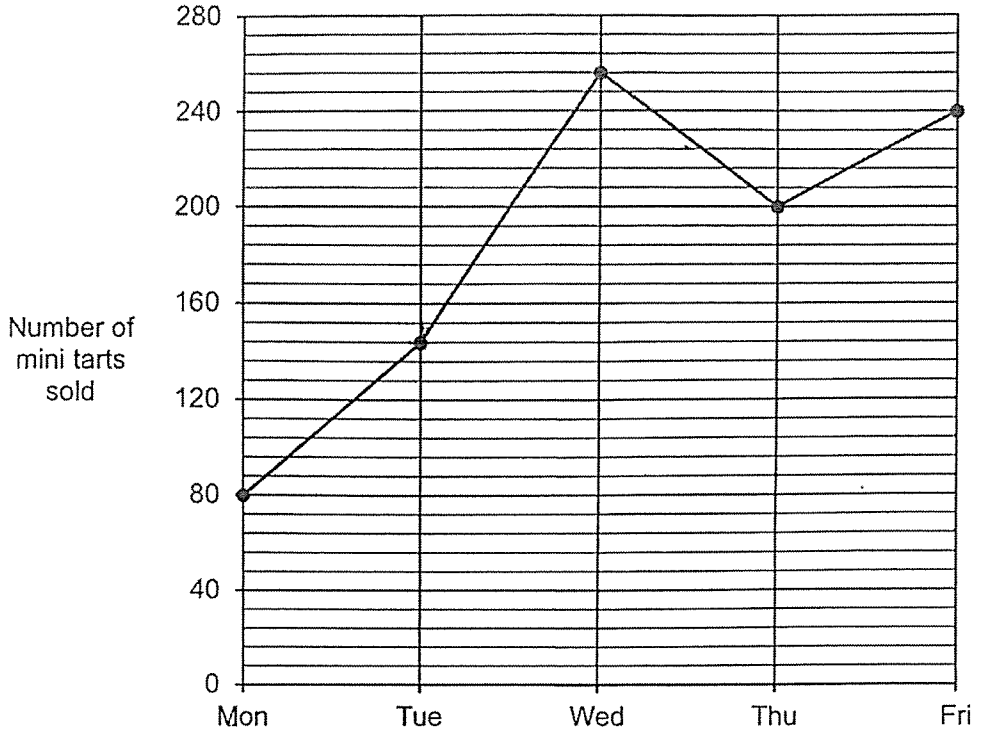
11. The graph below shows the number of mini tarts sold from Monday to Friday.



(a) What was the average number of mini tarts sold from Monday to Friday?

Ans: (a) _____[2]

(b) The average number of mini tarts sold on Saturday and Sunday was 26 more than the average number of mini tarts sold from Monday to Friday.

Write down one possible set of values for the number of mini tarts sold on Saturday and Sunday.

Ans: (b) _____ , _____ [2]

Sub-Total :

ACSJ

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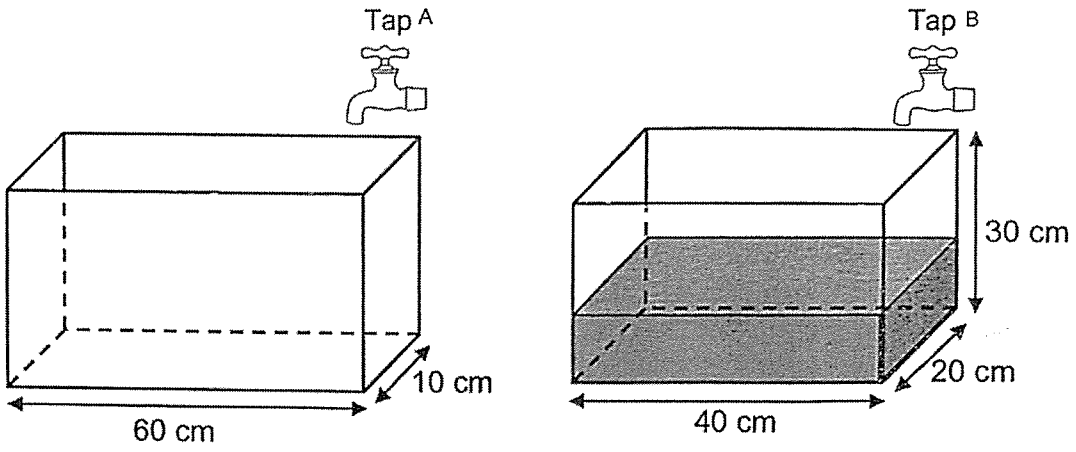
12. Two rectangular tanks are shown below.



Tank A **Tank B**

At first, Tank A was empty and Tank B was $\frac{1}{5}$ filled with water. Tap A and Tap B were turned on at the same time and water from both taps flowed at the same rate of 1.2 litres per minute.

a) What was the height of water in Tank A after 1 minute?

Ans : (a) _____ [1]

b) How long did it take for the height of the water to be the same in both Tanks?

Ans : (b)_____ [3]

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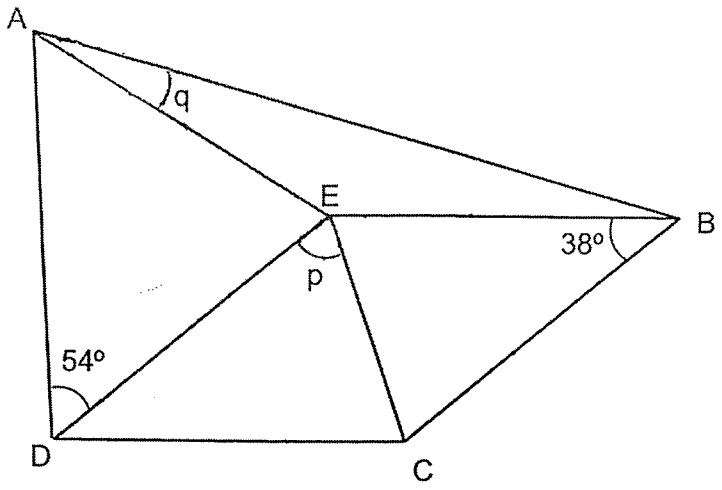
Sub-Total :

ACSJ

13. In the figure below, BCDE is a rhombus and AE = DE. ∠EBC = 38° and ∠ADE = 54°



(a) Find ∠p.

Ans : (a)_____ [2]

(b) Find ∠q.

Ans : (b)_____ [3]

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ACSJ

Sub-Total :

ACSJ

14. Some white and grey rectangles were used to form figures that follow a pattern. The first 4 figures are shown.

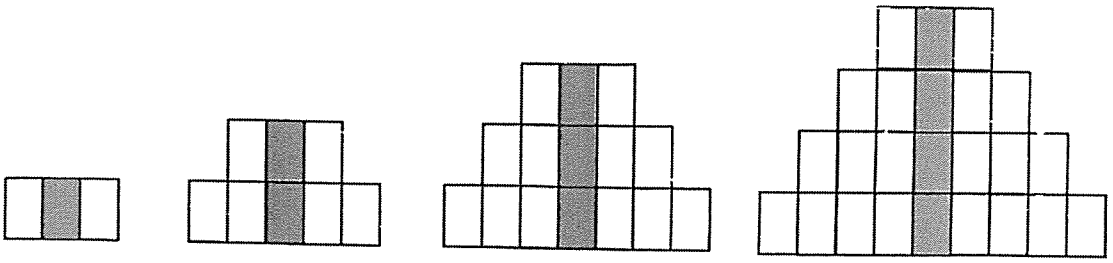

Figure 1 Figure 2 Figure 3 Figure 4

(a) The table shows the number white and grey rectangles used for each figure. Complete the table for Figure 5.

Figure Number	Number of white rectangles	Number of grey rectangles
1	2	1
2	6	2
3	12	3
4	20	4
5		

[1]

(b) What is the total number of white and grey rectangles in Figure 12?

Ans : (a)_____ [1]

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ACSJ

Sub-Total :

ACSJ

(c) A figure in the pattern has 625 more white rectangles than grey rectangles. What is the number of white rectangles in this figure?

Ans: (b)_____ [2]

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ACSJ

Sub-Total :

15. Mrs Tan had a box of green, blue and red beads. She had 248 green beads. 30% of her beads were blue. She had 24 fewer red beads than blue beads.

(a) What was the total number of beads she had in the box?

Ans : (a) _____ [2]

(b) Mrs Tan's son bought her some blue beads. Her total number of beads then increased by 25%. How many blue beads did she have in the end?

Ans: (b) _____ [2]

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ACSJ

Sub-Total :

16. James used $\frac{1}{4}$ of his money to buy 3 pencil cases and 7 key chains. The cost of each pencil case is 3 times the cost of each key chain. He bought some more key chains with $\frac{5}{6}$ of his remaining money. He spent $30.40 more on all the key chains than on all the pencil cases. How much was the cost of one key chain?

Ans : _____ [4]

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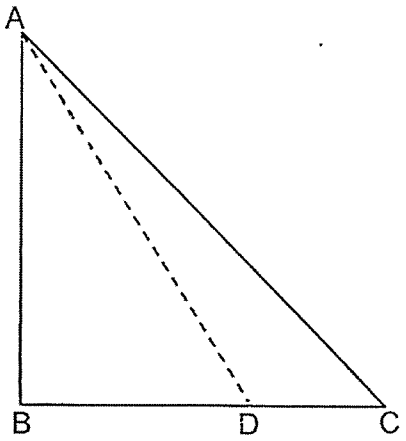
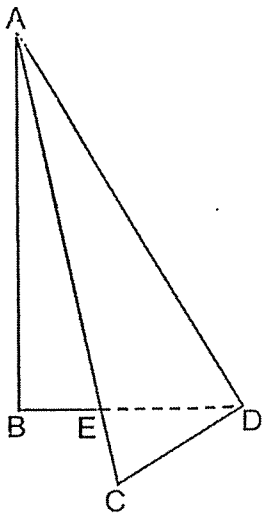
ACSJ

Sub-Total :

17. Triangle ABC is folded along the line AD. The area of the new figure is $\frac{7}{12}$ the area of Triangle ABC. The area of Triangle ADE is 65 cm^2. Find the area of Triangle ABC.





Ans : _____ [5]

End of Paper 2

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ACSJ

Sub-Total :

SCHOOL : ACS Junior PRIMARY SCHOOL
LEVEL : PRIMARY 6
SUBJECT : MATH
TERM : Prelims (SA2) 2022

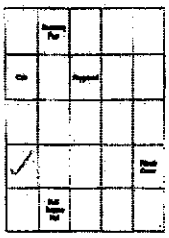
PAPER 1 BOOKLET A

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

Q 11	Q12	Q13	Q14	Q15
3	3	4	3	2

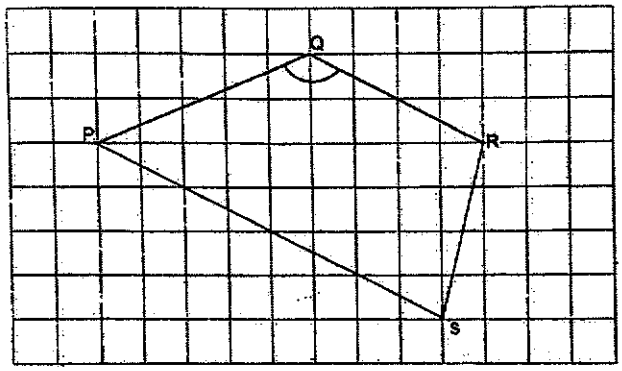
PAPER 1 BOOKLET B

Q16)	98 – 3 x (17-3) = 98 – 3 x 14 = 98 – 42 = 56
Q17)	70.707
Q18)	1.6litre = 1600ml
Q19)	3x5x3=45
Q20)	B&C
Q21 a)	$y + 11 + 7y - 9 - 3y$ = 5y + 2
Q21 b)	$3x8 + \frac{8}{5}$ $= 24 + \frac{8}{5}$ $= 25 + \frac{3}{5}$ $= 25\frac{3}{5}$
Q22)	$\frac{63}{9} = 7$

	$7x5 = 35$
Q23)	South-East
Q23 b)	
Q24)	Height of Water = $600 \div 30 = 20$ $20 \div 4 = 5$ $5 \times 5 = 25$
Q25)	∡TQS $(180° - 46°) \div 2$ $= 134 \div 2$ $= 67$ ∡y $180° - 67 - 17$ $= 96°$
Q26)	Humour Percent 100 – 25 – 38 -24 =75-67 = 8 Difference percent 38-8 =30 30% = 150 1% = 150÷30=5 29% = 5 × 29=145
Q27)	R, S, A
Q28)	$\frac{10}{100} * 80 = 8$ 20% = 8 100% = 8 × 5 = 40 Total= 80+40= 120

PAPER 2

Q1)	C:T C:T 7:4 3:2 6:4 1 unit = 26 11 units = 26 X 11 = 286
Q2)	1 unit = 210 ÷ 14 = 15 16 units = 15 × 16 = 240

Q3)	131° 
Q4)	10 units = 1.2 1 unit = 1.2 ÷ 10 = 0.12 40units = 0.12 × 40 = 4.8
Q5)	Total needed = 32 × 3 = 96 Needed = 96 - 31 - 28 = 37
Q6a)	Total = 4y + 9 (4y+9) km
Q6b)	53km = 4y+9km 44km = 4y Y = 44 ÷ 4 = 11
Q7)	∡DAF= 60° - 45° = 15° ∡EFG = 180°-60°-15°=105°
Q8a)	Student: B A= (30x3) – 8 = 82 B= (29X3) – 4 = 83 C= (32x3) – 16 = 80 Points: 83
Q8b)	3+1 = 4 More balls = 16 ÷ 4 = 4 Tossed in = 30+4=34
Q9a)	Total = 12+27+45=84
Q9b)	Y:B:P:Total 2:1:1:4 1 set = (12×2) + (45×1) + (27×1) = 96 No. of Sets 384 ÷ 96 = 4 4 × 27 = $108

Q10)	Total Speed = 3525 ÷ 15 = 235 Harry's speed = 235-110 = 125 125m/min
Q11a)	Average speed: $\frac{80 + 144 + 256 + 200 + 240}{5}$ $= \frac{920}{5}$ = 184
Q11b)	184 + 26 = 210 210 × 2 =420 200 + 220 = 420 Ans B: 200,220
Q12a)	Height 1.2litre = 1200ml 1200 ÷ 600 = 2 Ans: 2cm
Q12B	Tank B Height / min = 1200 ÷ 800 = 1.5 Tank D Height at first = $\frac{1}{5} * 30 = 6$ Answer: 12min
Q13a	∢P = (180°-38°)÷2 = 71°
Q13b	∢AED= 180°-54°-54°=72°-54°-54°=72° ∢AEB= 360°-72°-71°-71°=146° ∢Q= (180°-146°)÷2 = 17°
Q14a	Figure number 5 = 30 & 5
Q14b	(Figure number + 1)^2 -1 = Total of figure number rectangles (12+1)×(12+1)-1=168
Q14C	Figure number $2\sqrt{624} = 25$ White Triangle 25 ×(25+1) = 650
Q15a	40% = 248 - 24 = 224 10% = 224 ÷ 4 = 56 100% = 56 × 10 = 260
Q15B	Son bought= $\frac{25}{100} \times 560$ = 140 In the end= (56×3)+140 = 308
Q16	3 Pencil Cases = 9 Key Chains 2units = 9+7 = 16 1 unit = 16/2 = 8

	7 units = 8×7 = 56 Keychain= 56-9 = 47 More 47-9= 38 38 keychains = $30.40 1 Keychain = $0.80
17	$1-\frac{7}{2}=\frac{5}{12}$ $65cm^2 = \frac{5}{12}$ $\frac{1}{12} = 65 \div 5 = 13$ Total Area= 13 ×12 = 156cm^2