RIVER VALLEY PRIMARY SCHOOL

PRELIMINARY EXAMINATION

2019

MATHEMATICS

PRIMARY SIX

Name : _____ ( )

Class : Primary 6 (_____)

Date : 23 August 2019

Duration : 60 min (Total time for Booklets A and B)

PAPER 1

(BOOKLET A)

INSTRUCTIONSTO CANDIDATES

1. Write your Name, Register No. and Class in the space above.
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 on 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 correct oval (1, 2, 3 or 4) on the Optical Answer Sheet. (20 marks)

1. What is the value of 10 + 2000?

(1) 200

(2) 0.5

(3) 0.05

(4) 0.005

2. The length of a public bus in Singapore is about _____.

(1) 12 cm

(2) 12 m

(3) 120 cm

(4) 120 m

3. How many eighths are there in $3\frac{1}{4}$?

(1) 13

(2) 24

(3) 25

(4) 26

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4. The table below shows the programme guide for Nickadoo Channel.

Time	Programme
11 00	Mick Cat
11 45	Nature Whisper
12 50	Anna and Elsa (Movie)
14 15	Bob Cat

Elvis watched Nature Whisper and Anna and Elsa (Movie). How long did he spend watching both shows?

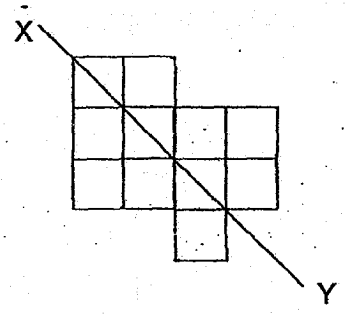
(1) 1 h 5 min

(2) 1 h 25 min

(3) 1 h 50 min

(4) 2 h 30 min

5. The figure below shows 11 squares. What is the smallest number of squares that must be added so that the line XY becomes a line of symmetry?



(1) 1

(2) 2

(3) 3

(4) 4

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6. Which of the following letters has both parallel and perpendicular lines?

(1) M
(2) A
(3) T
(4) H

7. The original price of a bag was $120. Linda bought it at a discount of 20%. How much did Linda pay for the bag?

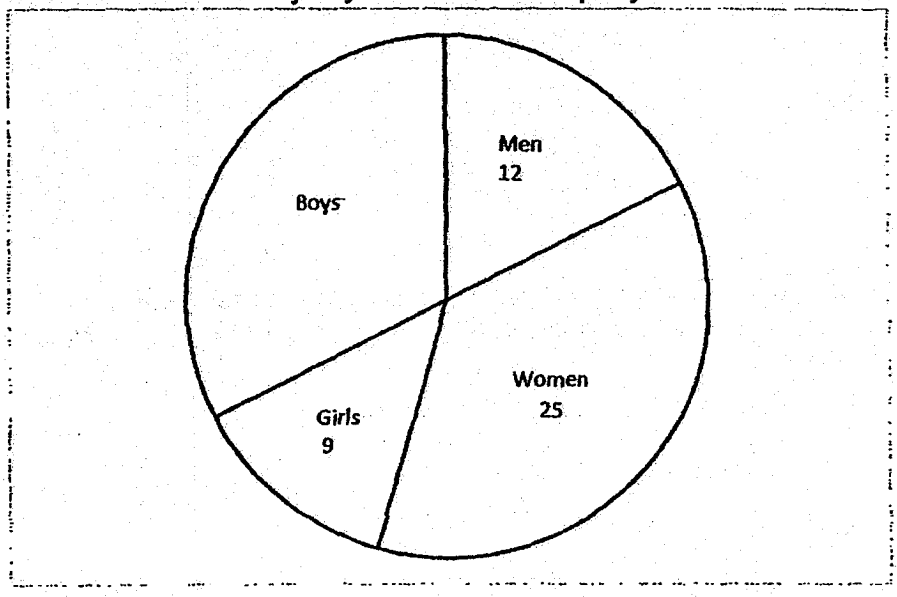
(1) $24
(2) $96
(3) $100
(4) $144

8. Ali was facing north-west at first. He then turned 225° anti-clockwise. Which direction would he be facing in the end?

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

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9. The pie chart shows the number of people at a party. Half of them are girls and women. How many boys are there at the party?



(1) 16

(2) 21

(3) 22

(4) 34

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10. Razak read the timetable shown below for the train that leaves the MRT station for the airport.

Leaves MRT Station	Arrives at the airport
6.30 a.m.	7.15 a.m.
6.45 a.m.	7.30 a.m.
7.20 a.m.	8.05 a.m.
7.45 a.m.	8.30 a.m.
8.30 a.m.	9.15 a.m.

Razak wants to catch the latest train that will get him to the airport by 8.40 a.m. At what time does this train leave the MRT station?

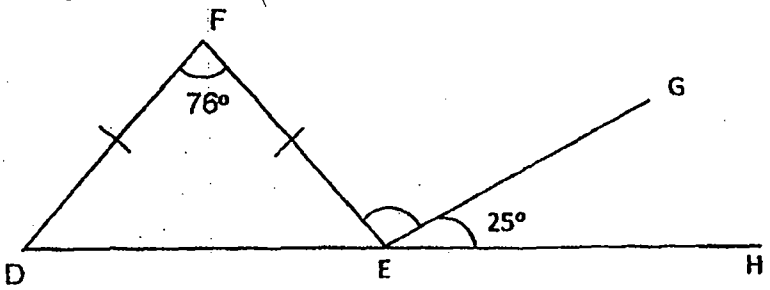
(1) 6.45 a.m.

(2) 7.20 a.m.

(3) 7.45 a.m.

(4) 8.30 a.m.

11. In the figure below, DEF is an isosceles triangle. FD = FE. DEH is a straight line, $\angle GEH = 25^\circ$ and $\angle DFE = 76^\circ$. Find $\angle FEG$.



(1) 104°

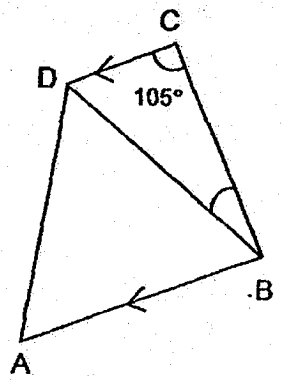
(2) 103°

(3) 77°

(4) 52°

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12. In the figure below, ABCD is a trapezium and ABD is an equilateral triangle. $\angle BCD = 105^o$. Find $\angle CBD$.



(1) 15^o

(2) 45^o

(3) 60^o

(4) 75^o

13. The average mass of Alex, Ben and Charles is 49 kg. Alex is 9 kg heavier than Ben and 6 kg heavier than Charles. What is Charles' mass?

(1) 44 kg

(2) 45 kg

(3) 48 kg

(4) 50 kg

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14. James spent $500 of his savings on Monday and $\frac{2}{5}$ of his remaining savings on Tuesday. After that, he found that he had $\frac{1}{3}$ of his original savings left. How much money did James spend on Tuesday?

(1) $125

(2) $250

(3) $625

(4) $1125

15. There is an equal number of stamps in Album A and Album B.
The ratio of the number of local stamps to the number of foreign stamps in Album A is 3 : 2. In Album B, $\frac{4}{15}$ of the stamps are local stamps while the rest of the stamps are foreign stamps.
What is the ratio of the total number of local stamps to the total number of foreign stamps in both albums?

(1) 7 : 13

(2) 13 : 7

(3) 13 : 17

(4) 17 : 13

- End of Booklet A -

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RIVER VALLEY PRIMARY SCHOOL

PRELIMINARY EXAMINATION

2019

MATHEMATICS

PRIMARY SIX

Name : _____ ( )

Class : Primary 6 (_____)

Date : 23 August 2019

Duration : 60 min (Total time for Booklets A and B)

PAPER 1
(BOOKLET B)

INSTRUCTIONSTO CANDIDATES

1. Write your Name, Register No. and Class in the space above.
2. Do not turn over this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. You are **not** allowed to use a calculator.

SUMMARY OF MARKS :

			Questions	Marks Awarded	Maximum Marks
Paper 1	Booklet A	MCQ	1 – 15		20
	Booklet B	SAQ	16 – 30		25
Paper 2		SAQ	1 – 5		10
		LAQ	6 - 17		45
	Total				100

Parent's Signature :

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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)

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16. Write down all the common multiples of 4 and 9 that are smaller than 80.

Ans: _____

17. Express 2.66 kilometres in metres.

Ans: _____ m

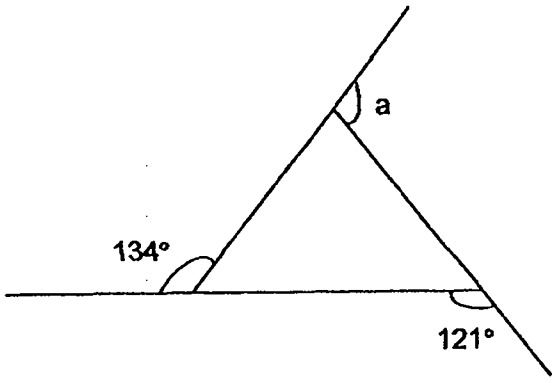
18. Express $\frac{6}{7}$ as a decimal. Round off your answer to 2 decimal places.

Ans: _____

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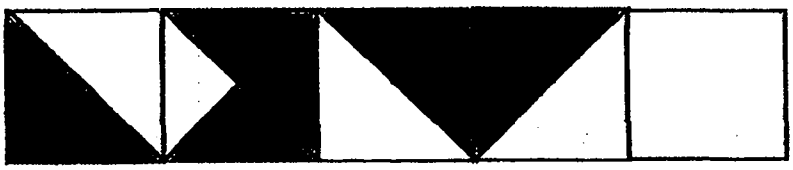
19. The figure is formed by 3 straight lines. What is the value of ∠a.

Do not write in this space



Ans : _____ °

20. The figure is made up of 5 identical squares. What percentage of the figure is **shaded**?



Ans: _____ %

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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. Alice was given an allowance of \$350 a month. She spent $\frac{4}{7}$ of her allowance each month. How much did she spend each month?

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Ans : \$_____

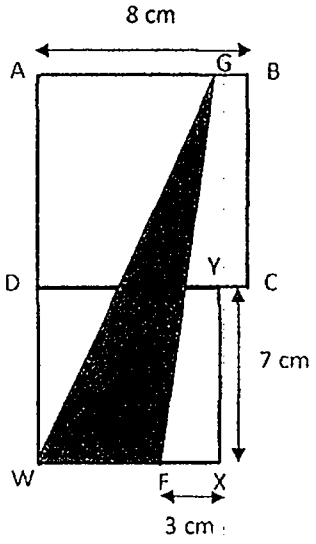
22. A rectangular tank measuring 50 cm by 30 cm by 20 cm is $\frac{2}{5}$ filled with water. How many litres of water are there in the tank?

Ans :_____ litres

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23. The figure below is made up of 2 squares, ABCD and DWXY. GWF is a triangle. Find the area of the **unshaded** parts of the figure.

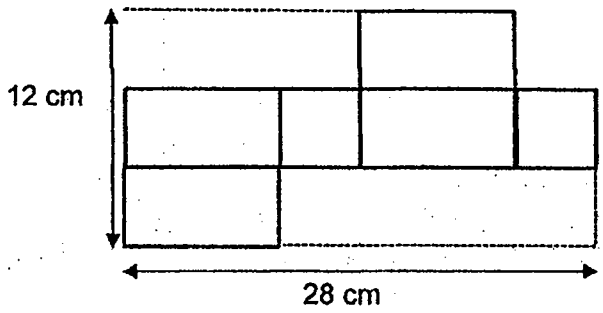
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F

Ans: _____ cm^2

24. The figure shows the net of a cuboid. The cuboid has a square base. Find the volume of the cuboid.



Ans: _____ cm^3

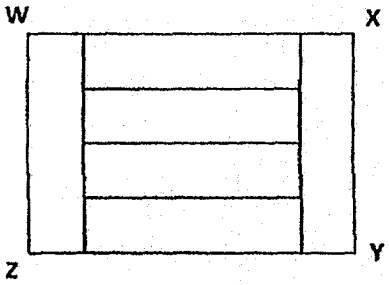
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25. Jaime is 13 years old. Her sister is r years younger than her. What is the sum of their age in 3 years' time?

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Ans: _____ years old

26. Rectangle WXYZ is made up of 6 identical small rectangles. The perimeter of Rectangle WXYZ is 120 cm. What is the area of each small rectangle?

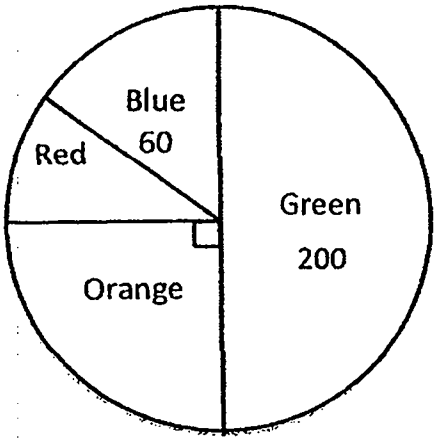


Ans: _____ cm^2

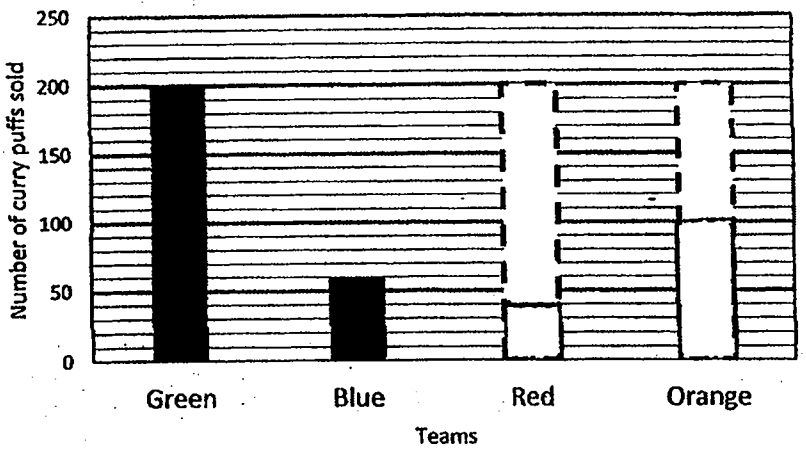
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27. The pie chart below shows the number of curry puffs sold by 4 teams in a carnival. The Green team sold half of the total number of curry puffs.

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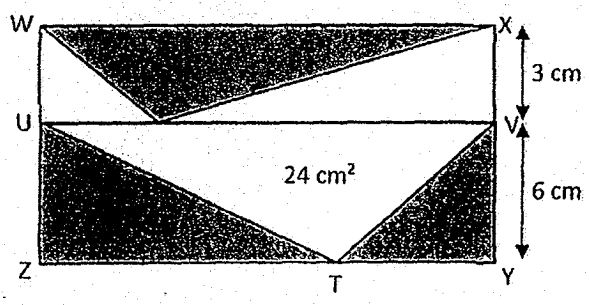
In the graph below, draw the bar to show the number of curry puffs sold by the Red and Orange teams.



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28. The figure below shows a rectangle WXYZ which is divided into 2 rectangles, WXVU and UVYZ. XV is 3 cm and VY is 6 cm. The area of triangle UVT is 24 cm². Find the total area of the shaded parts.

Do not write in this space



Ans: _____ cm²

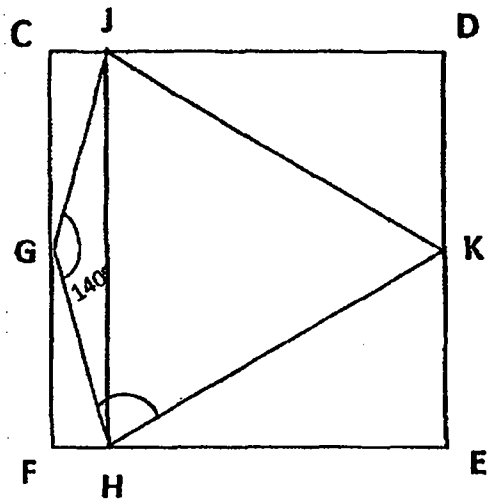
29. Gopal and Salim took part in their school's fund-raising walk. Gopal's average speed was 20 m/min faster than Salim. When Gopal completed the walk in 40 min, Salim had only walked $\frac{3}{5}$ of the distance. Find Gopal's average speed for the walk.

Ans: _____ m/min

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30. In the figure, CDEF is a square. JKH is an equilateral triangle. G is the midpoint of CF and JH is parallel to DE. ∠JGH = 140 °. Find ∠GHK.

Do not write in this space



Ans: _____ °

- End of Booklet B -

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RIVER VALLEY PRIMARY SCHOOL

PRELIMINARY EXAMINATION

2019

MATHEMATICS

PRIMARY SIX

Name : _____ ( )

Class : Primary 6 (_____)

Date : 23 August 2019

Duration : 1 h 30 min

PAPER 2

INSTRUCTIONS TO CANDIDATES

1. Write your Name, Register No. and Class in the space above.
2. Do not turn over this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. You are **allowed** to use a calculator.

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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. 5 students took part in a donation drive. The table below shows the amount of money collected by the students. The amount collected by Charlie and Denise was not shown.

Do not write in this space

Students	Ahmad	Bala	Charlie	Denise	Emma
Amount collected	$250	$180	[redacted]		$200

The average amount of money collected by the 5 students was $320. Charlie collected $170 less than Denise. How much money did Charlie collect?

Ans : $_____

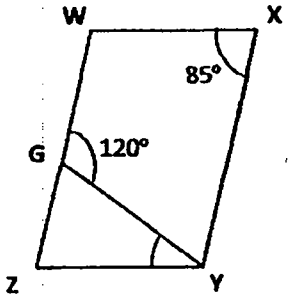
2. There are 102 red and green flags hanging on a string. There are 3 green flags between any 2 red flags. What is the largest number of red flags on the string?

Ans : _____

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3. In the figure, WXYZ is a parallelogram. GY is a straight line. ∠WXY = 85° and ∠WGY = 120°. Find ∠ZYG.

Do not write in this space



Ans : _____

4. The diameter of a circle is 14 cm. (Take $\pi = \frac{22}{7}$)

Based on the information above, put a tick in the correct box below.

	True	False	Not possible to tell
(a) The area of the circle is 154 cm^2.			
(b) When the diameter of the circle is doubled, the area of the new circle becomes 2 times the area of the original circle.			

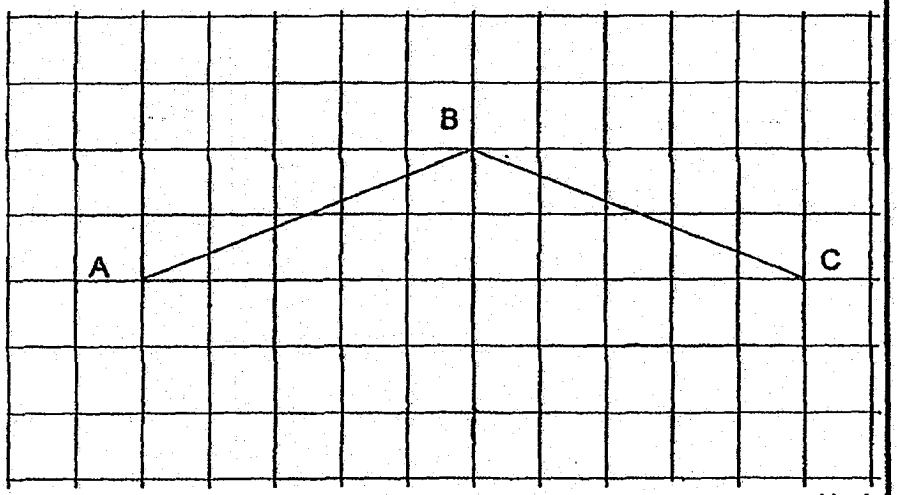
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5. In the square grid below, AB and BC are two sides of a rhombus ABCD.

Do not write in this space

(a) Complete and label the drawing of rhombus ABCD.

(b) Measure and write down the size of ∠ABC.



(1m)

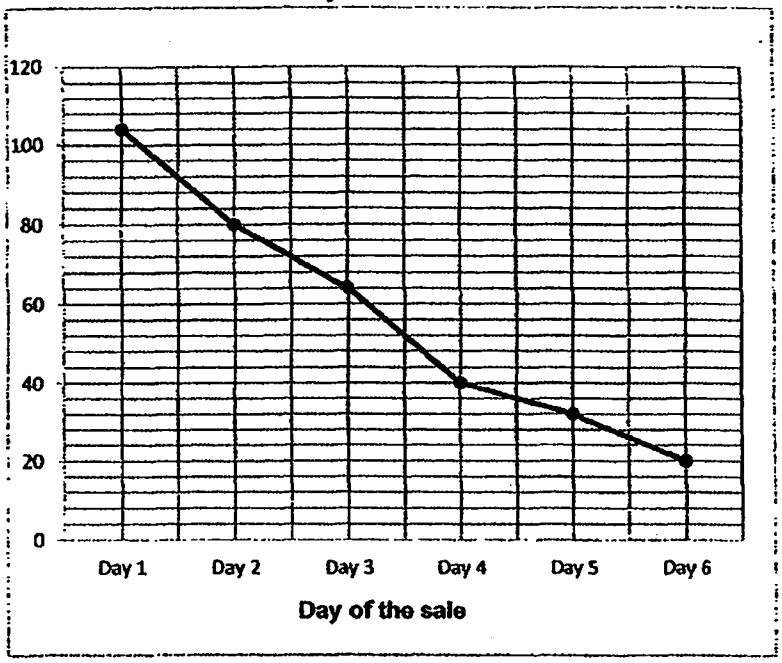
Ans : (b)_____°

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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)

6. A company offered a total of 120 printers at a 25% discount over a 6-day sale. The line graph below shows the number of printers left **unsold** at the end of each day.

Do not write in this space



During the sale, the discounted price of each printer was $150. After the 6-day sale, the remaining printers were sold without any discount. What was the total amount of money collected from selling all the 120 printers?

Ans:__ _____ (3m)

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Do not write in this space

7. The table shows the number of pies baked by 3 bakers.

Names	Number of Pies
Alice	$p + 7$
Ben	$2p - 5$
Cindy	p

(a) Find the total number of pies baked by the three bakers. Express your answer in terms of p.

(b) If $p = 55$, find the average number of pies baked by the three bakers.

Ans: (a) _____ (1m)

(b) _____ (2m)

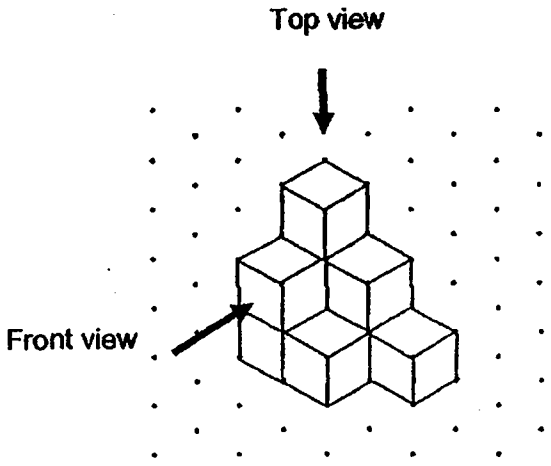
8. Jack and Jill started cycling from the same place in opposite directions along a straight path. Jill cycled at a speed of 9 km/h. Jack cycled at a speed 2 times that of Jill. How far apart were they after cycling for 45 minutes?

Ans: _____ (3m)

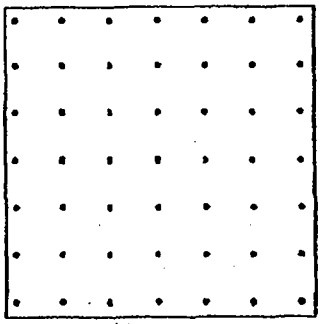
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9. Bernard stacked 9 cubes and glued them together to form the solid below.

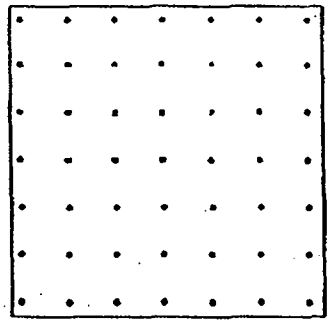
Do not write in this space



(a)Draw the front view and top view of the solid on the grid below. (2 marks)



Front view



Top view

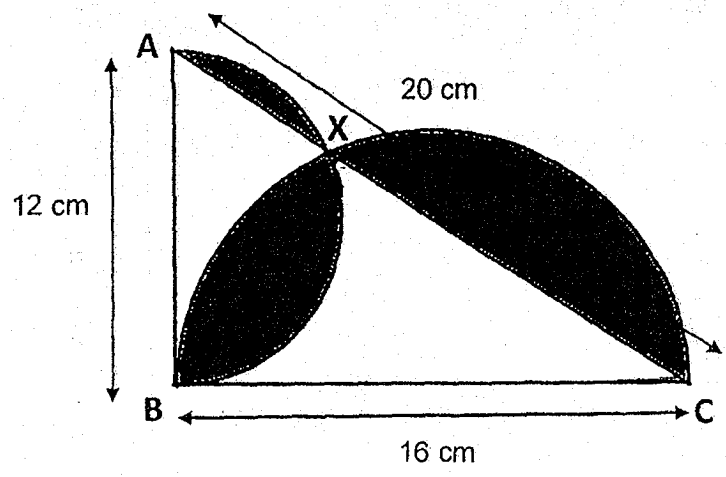
(b)What is the minimum number of cubes Bernard has to add to the solid to make it into a bigger cube?

Ans: (b)_____(1m)

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10. The figure below is made up of two semi-circles and a right-angled triangle ABC. The diameter of the two semi-circles AB and BC are 12 cm and 16 cm respectively. The two semi-circles meet at X. AC is 20 cm. Find the area of the shaded area (Take π = 3.14)

Do not write in this space



Ans :_____ _____ _____(3m)

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11. Mrs Lim baked some cupcakes. She sold $\frac{1}{4}$ of them in the morning and $\frac{3}{5}$ of them in the afternoon. She decided to bake another 252 cupcakes. The number of cupcakes she had in the end was $\frac{3}{4}$ as many as the number of cupcakes she had at first. How many cupcakes did Mrs Lim have in the end?

Do not write in this space

Ans:_____ (3m)

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12. Mrs Chandra bought $\frac{4}{5}$ as many pears as apples and $\frac{2}{5}$ as many mangoes as apples. She paid a total of $150 for all the fruits. The ratio of the amount of money she spent on the apples to the amount she spent on the pears was 3 : 2. The ratio of the amount of money she spent on the pears to the amount of money she spent on the mangoes was 1 : 5. The cost of each apple was $0.60. Find the total number of fruits Mrs Chandra bought.

Do not write in this space

Ans :_____ _____(4m)

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13. Li Ling had some \$2 notes and Anna had some \$5 notes. After Li Ling used $\frac{1}{4}$ of her notes and Anna used $\frac{2}{7}$ of her notes, they had the same number of notes left. If they had \$315 altogether in the end, how much money did Li Ling have at first?

Do not write in this space

Ans:_____ (4m)

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14. 250 boys and girls shared a sum of money. The average amount each child received was $69.88. The average amount each boy received was $55 and the average amount each girl received was $85. How much more money did the girls receive than the boys?

Do not write in this space

Ans :_____ _____ _(4m)

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15. Stanley bought 4 times as many pencils as notebooks and 3 times as many erasers as notebooks. He spent a total of $62.40 on these items. He spent $9.60 more on the pencils than the notebooks and $4.80 more on the notebooks than the erasers. Each notebook cost $2.40 more than each eraser. How many pencils did Stanley buy?

Do not write in this space

Ans :_____ _____ ___(5m)

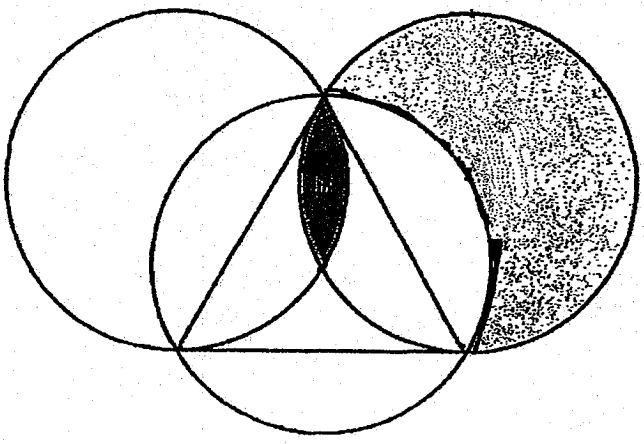
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16. The figure below is made up of three identical overlapping circles and one equilateral triangle. Given that the area of the triangle is 63 cm^2 and the radius of each circle is 7cm,

Do not write in this space

a) Find the perimeter of the shaded part A.

b) Find the area of the shaded part B (Take $\pi = \frac{22}{7}$)



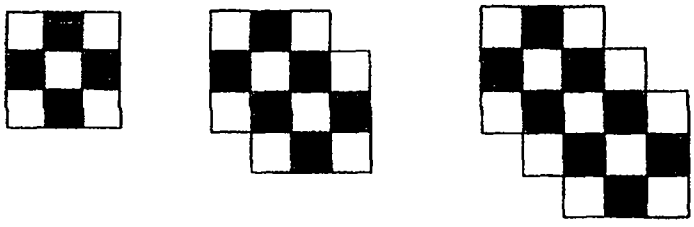
Ans : (a)_____ (1m)

(b)_____ (4m)

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17. Bala uses shaded and unshaded squares to form figures that follow a pattern. The first three figures are shown below.

Do not write in this space



(a) The table below shows the number of unshaded square for each figure.
Complete the table for Figure 4 and Figure 5. (1 mark)

Figure Number	Number of shaded squares	Number of unshaded squares
1	4	5
2	6	8
3	8	11
4	10	
5	12	

(b) What is the difference in the number of unshaded squares Bala uses for Figure 11 and Figure 14?

(c) Another figure in the pattern has 20 more unshaded than shaded squares. What is the total number of shaded and unshaded squares in that figure?

Ans : (b)__ _____ __(2m)

(c)__ _____ __(2m)

End of Paper 2 -

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SCHOOL : RIVER VALLEY PRIMARY SCHOOL
LEVEL : PRIMARY 6
SUBJECT : MATH
TERM : 2019 PRELIM

PAPER 1 BOOKLET A

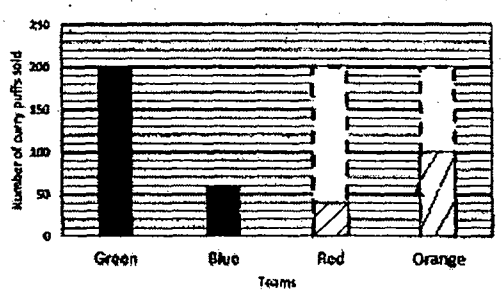
Q 1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
4	2	4	4	2	4	2	3	3	3

Q 11	Q12	Q13	Q14	Q15
2	1	3	2	3

PAPER 1 BOOKLET B

Q16)	36 , 72
Q17)	2.66km = 2660m
Q18)	0.86
Q19)	180° – 134° = 46° 180° – 121° = 59° 180° – 46° – 59° = 75° $< a = 180° - 75° = 105°$
Q20)	4u x 5 = 20u 2u + 3ub + 2u + 2u = 9u $\frac{9}{20} \times 100\% = 45\%$

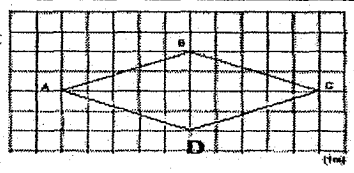
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Q21)	350 ÷ 7 = 50 50 x 4 = $200
Q22)	50 x 30 x 20 = 30000 30000 ÷ 5 = 6000 6000 x 2 = 12000 $12000ml = 12litres$
Q23)	8 x 8 = 64 7 x 7 = 49 64 + 49 = 113 7 – 3 = 4 8 + 7 = 15 $\frac{1}{2} \times 4 \times 15 = 30$ 113 – 30 = 83cm²
Q24)	12 ÷ 3 = 4 28 – 4 – 4 = 20 20 ÷ 2 = 10 10 x 4 x 4 = 160cm³
Q25)	13 – r 13 + 3 = 16 13 – r + 3 = 16 – r 16 + 16 – r = (32 – r) years old
Q26)	4u + 1u + 1u = 6u 6u x 2 = 12u 4u x 2 = 8u 12u + 8u = 20u 20u → 120 1u → 120 ÷ 20 = 6 4u → 6 × 4 = 24 24 x 6 = 144cm²
Q27)	 2u→ 200 1u→ 200 ÷ 2 = 100(*orange*) 200 – 60 – 100 = 40(red)

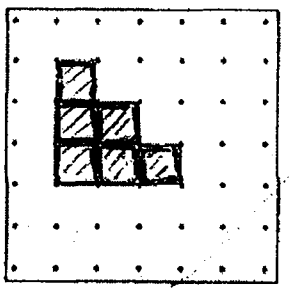
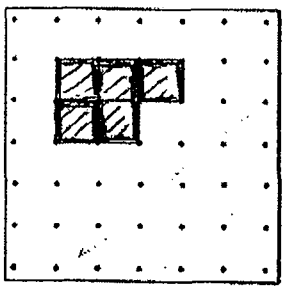
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Q28)	$\frac{1}{2} \times 6 \times ? = 24$	$\frac{1}{2} \times 3 \times 8 = 12$
	$\frac{1}{2} \times 6 = 3$	8 x 6 = 48
	$3 \times ? = 24$	48 – 24 = 24
	$24 \div 3 = 8$	24 + 12 = 36cm²
Q29)	20m/min x 40 = 800 800 ÷ 2 = 400 400 x 5 = 2000 2000 ÷ 40 = 50m/min	
Q30)	$< GHJ = (180° - 140°) \div 2 = 20°$ $< GHK = 20° + 60° = 80°$	

PAPER 2

Q1)	320 x 5 = 1600 250 + 180 = 430 430 + 200 = 630 1600 – 630 = 970 970 – 170 = 800 800 ÷ 2 = $400
Q2)	102 ÷ 4 = 25 25 + 1 = 26
Q3)	$< ZGY = 180° - 120° = 60°$ $< WXY = < WZY = 85°$ $< ZYG = 180° - 85° - 60° = 35°$
Q4)	a)True b)False
Q5)	a)  b)137°

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Q6)	120 – 20 = 100 100 x 150 = 15000 75% → 150 100% → $\frac{150}{75} \times 100 = 200$ 200 x 20 = 4000 4000 + 15000 = $19000
Q7)	a)p+7+2p-5+p= 2p+p+p+7- 5 = 4p+7-5 = (4p+2)p b)55 x 4 = 220 220 + 2 =222 222 ÷ 3 = 74
Q8)	$18km/h \times \frac{3}{4}h = 13.5km$ $9km/h \times \frac{3}{4}h = 6.75km$ 13.5 + 6.75 = 20.25km
Q9)	a)  Front view  Top view b)3 x 3 x 3 = 27 27 – 9 = 18
Q10)	$3.14 \times 6 \times 6 \times \frac{1}{2} = 56.52$ $3.14 \times 8 \times 8 \times \frac{1}{2} = 100.48$ $100.48 + 56.52 = 157$ $\frac{1}{2} \times 12 \times 16 = 96$ $157 - 96 = 61cm^2$

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Q11)	$\frac{3}{5} \times 4 = \frac{12}{20}$ 20u – 12u – 5u = 3u 15u – 3u = 12u $12u \rightarrow 252$ $1u \rightarrow 252 \div 12 = 21$ 21 x 3 = 63 252 + 63 = 315
Q12)	A : P : M 3 : 2 X2 1 : 5 3 : 2 : 10 $10u + 2u + 3u = 15u$ $15u \rightarrow 150$ $1u \rightarrow 150 \div 15 = 10$ $2u \rightarrow 10 \times 2 = 20$ $3u \rightarrow 10 \times 3 = 30$ $30 \div 0.60 = 50$ $50 \div 5 = 10$ P : A : M 4 : 5 5 : 2 4 : 5 : 2 5u + 4u + 2u = 11u 11 x 10 = 110
Q13)	$\frac{4}{4} - \frac{1}{4} = \frac{3}{4}$ $\frac{7}{7} - \frac{2}{7} = \frac{5}{7}$ 15 x 2 = 30 15 x 5 = 75 75 + 30 = 105 315 ÷ 105 = 3 20 x 3 = 60 (number of $2 notes) 60 x 2 = $120
Q14)	10540 – 6930 = $3610
Q15)	3u = 62.40 - 9.6 - 4.8 - 4.8 = 43.20 1u = 43.20 ÷ 3 = 14.4 (TCE) TCN = 14.40 + 4.80 = 19.20 3p = 14.40 1p = 14.40 ÷ 3 = 4.80 19.20 – 4.80 = 14.40 (big diff) 14.40 ÷ 2.40 = 6 6 x 4 = 24

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Q16)

a) $\frac{22}{7} \times 14 = 44$

b) $\frac{22}{7} \times 7 \times 7 = 154$

$\frac{1}{2} \times 14 \times 7 = 49$

$(154 - 49) \div 3 = 35 = 9\frac{1}{3}\text{cm}^2$

Q17)

a)

Figure Number	Number of shaded squares	Number of unshaded squares
1	4	5
2	6	8
3	8	11
4	10	14
5	12	17

b)9

c)62 + 42 = 104

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