

RED SWASTIKA SCHOOL

2023 PRELIMINARY ASSESSMENT

MATHEMATICS PAPER 1

Name :		(1
Class:	Primary 6 /		
Date :	18 August 2023		
	•		

BOOKLET A

15 Questions 20 Marks Duration of Paper 1 (Booklets A & B): 1 hour

Note:

- 1. Do not open this Booklet until you are told to do so.
- 2. Read carefully the instructions given at the beginning of each part of the Booklet.
- 3. Do not waste time. If a question is difficult for you, go on to the next one.
- 4. Check your answers thoroughly and make sure you attempt every question.
- 5. In this booklet, you should have the following:
 - (a) Page 1 to Page 5
 - (b) Questions 1 to 15
- 6. You are not allowed to use a calculator.

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.

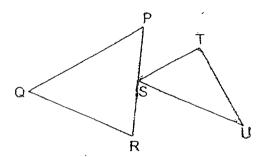
- 1 70 000 + 2000 + 300 + 8 =
 - (1) 72 380
 - (2) 72 308
 - (3) 72 038
 - (4) 70 238
- 2 Round 769 481 to the nearest thousand.
 - (1) 769 000
 - (2) 769 480
 - (3) 769 500
 - (4) 770 000
- 3 Express $9\frac{1}{5}$ as a decimal.
 - (1) 9.1
 - (2) 9.2
 - (3) 9.02
 - (4) 9.15
- 4 The diagram shows a cup of mile sold in a school canteen.



Which of the following could be the volume of the mile sold in the cup?

- (1) 20 ml
- (2) 20 ₹
- (3) 200 ml
- (4) 200 (

- Mrs Tan bought 16 apples, 10 oranges and 2 watermelons. What was the ratio of the total number of apples and watermelons to the number of oranges?
 - (1) 5:9
 - (2) 5:14
 - (3) 9:5
 - (4) 14:5
- The figure is made up of two triangles, PQR and STU.



Which two lines in the figure are perpendicular to each other?

- (1) PQ and TS
- (2) PR and RQ
- (3) US and SR
- (4) UT and TS
- 7 What is the value of $\frac{2}{3} \div \frac{4}{5}$?
 - (1) $\frac{8}{15}$
 - (2) $\frac{5}{6}$
 - (3) $1\frac{1}{5}$
 - (4) $1\frac{7}{8}$

- 8 Which decimal is greater than 0.07 but smaller than 0.15?
 - (1)0.1
 - (2)0.9
 - (3)0.01
 - (4) 0.19
- Find the value of $\frac{80-2p}{2}$ when p=6.
 - (1) 27
 - (2) 34
 - (3)54
- 10 The table shows the number of points scored by different groups of students in a quiz.

Number of points scored	0	1	2	3	4	
Number of groups	2	3	4	5	2	

How many groups scored at least two points?

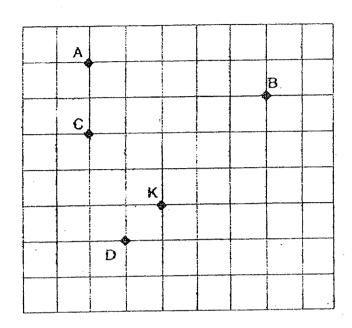
- (2) 7
- (3) 9
- . (4) 11
- 11 The table shows the height of different plants, W, X, Y and Z grown in a room over a month.

Plant	Height of plant at the start of the month.	Height of plant at the end of the month
W	110 cm	127 cm
Х	116 cm	131 cm
Υ	119 cm	132 cm
Z	118 cm	129 cm

Which plant has the greatest increase in height?

- X Y

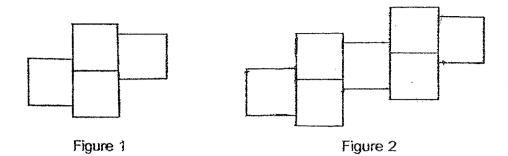
Kamie is standing at K facing north. 12



Kamie turns through an angle of 135° in an anti-clockwise direction, followed by $\frac{1}{4}$ - turn in the clockwise direction. Which point will Kamie be facing?

- (1) A
- (2)В
- C
- (3) (4)
- The usual price of a study table was \$300. During a sale, Mrs Kumar 13 bought 2 such study tables at a discount of 60%. How much was the total discount?
 - \$120
 - \$180 (2)
 - \$240
 - \$360

Figure 1 is formed using four identical squares. The perimeter of Figure 1 is 80 cm. Another three identical squares were added to Figure 1 to form Figure 2.



Find the perimeter of Figure 2.

- (1) 120 cm
- (2) 128 cm
- (3) 136 cm
- (4) 140 cm
- Xavier planned to save \$21 using his pocket money. The table below shows his saving plan for his weekly pocket money from Monday to Friday.

Day	Amount saved
Monday	50 ¢
Tuesday	50 ¢
Wednesday	60 ¢
Thursday	60 €
Friday	80 ¢

Xavier started to save on a Friday. On which day of the week did Xavier managed to save exactly \$21?

- (1) Monday
- (2) Tuesday
- (3) Wednesday
- (4) Thursday



RED SWASTIKA SCHOOL

2023 PRELIMINARY ASSESSMENT

MATHEMATICS PAPER 1

Name :	_ {	
Class : Primary 6 /		
Date*: 18 August 2023		
BOOKLET B		
15 Questions 25 Marks		
In this booklet, you should have the following (a) Page 6 to Page 12 (b) Questions 16 to 30	3 :	

MARKS

	OBTAINED	POSSIBLE
BOOKLET A		20
BOOKLET B		25
TOTAL		45

Parent's Signature		
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6 Write two hundred and five	thousand and three in numerals.
	Ans:
7 Find the value of 60 – 20 ÷	2+4
Ting the galactic to Lot	
	Ans:
?	
Find the value of $\frac{2}{3} \times 18$.	
	Ans:

19 Find the value of 5 ÷ 8. Express your answer as a decimal.

Ans:

20 Simplify 20r + 5r + 7 - r.

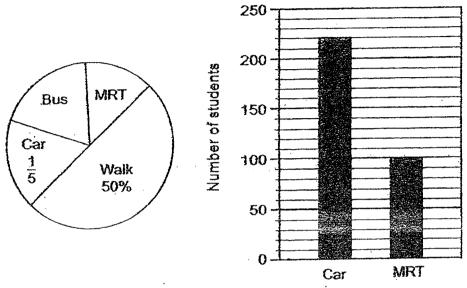
Ans:

provid	ions 21 to 30 carry 2 marks each. Show your workings clearly in the space ed for each question and write your answers in the spaces provided. For ons which require units, give your answers in the units stated. (20 marks)
21	Write an algebraic expression for the following.
	(a) Subtract 15 from k.
	Ans: (a)[1]
	(b) Jane typed 45 words in n minutes Express the number of words she can type in 1 minute in terms of n.
·	Ans: (b)[1]
22	Five letters, T, E, A, M and S are drawn on a square grid.
	(a) How many of the letter(s) has / have a line of symmetry?
	Ans: (a)[1]
	(b) Which letter(s) has/ have both parallel and perpendicular lines?
·	Ans: (b)[1]
	8

The net drawn for the solid shown below is incorrect. 23 Solid Net (a) Name the solid. Ans: (a) [1] (b) Shade a triangular face on the net that does not fit the net of the solid. [1] 24 The table below shows the timing of the movie XYZ shown in a cinema. Timing for movie XYZ 11.15 a.m. 2.30 p.m. 4.30 p.m. 7.15 p.m. 10.30 p.m. (a) The duration of the movie is 2 h 10 mins. What time will the last screening of the movie XYZ end? Express your answer using the 24hour clock. Ans: (a)_____ (b) Wendy arrived at the cinema at 11.45 a.m. How long must she wait for the next screening of movie XYZ? Give your answer in h and min. Ans: (b) _____ h ____ min [1]

Use the information below to answer Questions 25 and 26.

The pie chart below shows the different ways a group of students go to school. The number of students who travel to school by car and MRT are represented in the bar graph.

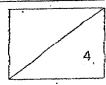


25 How many students walk to school?

Ans:	
------	--

26 How many students travel to school by bus?

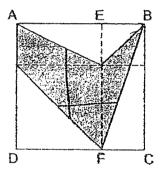
Ans: _____



27 Machine A prints 10 pages more than Machine B every minute. Machine C prints half as fast as Machine A. The three machines print a total of 270 pages in 3 minutes. At this rate, how many pages does Machine C print in 1 minute?

Ans:	

The figure ABCD is formed by two different squares and two identical rectangles. The area of the small square is $\frac{1}{4}$ the area of the big square.



(a) What fraction of EBCF is shaded?

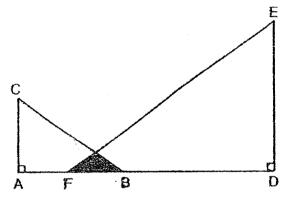
Ans: (a	a)	[1]
	7	

(b) What fraction of ABCD is shaded?

Ans: (I	o)_	*	. !	[1	
				_	-

A group of students had an average of \$10. Three students with a sum of \$57 joined the group and the average amount of each student increased by \$3. How many students were there in the group at first?

In the figure, ABC and DEF are right-angled triangles. The base of triangle DEF is twice as long as the base of triangle ABC. The height of triangle DEF is also twice as long as the height of triangle ABC. The difference in the area between the 2 unshaded parts is 18 cm².



Each statement below is either true, false or not possible to tell from the information given above. For each statement, put a tick (\checkmark) to indicate your answer.

Statement	True	False	Not possible to tell
The ratio of the length AF to the length AB is 1:2.			
The area of triangle DEF is twice the area of triangle ABC.			
The area of triangle EFD is 24 cm ² .			

END OF PAPER

4



RED SWASTIKA SCHOOL

2023 PRELIMINARY ASSESSMENT

MATHÉMATICS PAPER 2

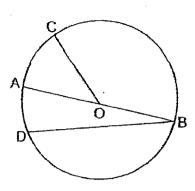
*			
Name :	***************************************)
Class : Primar	y 6 /		
Date: 18 Aug	pust 2023		
17 Questions 55 Marks Duration of Pa	per 2: 1 hour 30 n	ninutes	
2. Read careful of each part 3. Do not wast go on to the 4. Check your attempt ever 5. In this paper (a) Page 1 to (b) Question 6. You are allowed.	lly the instruction of the Booklet. e time. If a question next one. answers thoroughly question. 7, you should have Page 15	_	nnin w,
ARKS	OBTAINED	POSSIBLE	}
PAPER 1	ODINHALD	45	
PAPER 2		55	
		· • • • • • • • • • • • • • • • • • • •	

Parent's	Signature	:	

TOTAL

	s, give your answers in the units stated. (10 marks
(a)	Write down all the common factors of 4 and 6.
	Ans: (a)[1]
(b)	What is the largest common multiple of 4 and 6 that is smaller than 50?
	·
	Ans: (b)[1]
. Mr	s Devi had 2.5 m of ribbon at first. She used 8 cm of it.
(a)	Find the length of ribbon she had left in metres.
as	Ans: (a)m[1]
(b)	Mrs Devi then cut the remaining length of the ribbon into two equal pieces. Find the length of each piece of the ribbon in centimetres.
	• Ans: (b)cm [1]

3 In the circle below, O is the centre and AOB is a straight line.



(a) Measure and write down the diameter of the circle.

Ans: (a) _____ cm [1]

(b) Using your answer in (a), find the circumference of the circle. Leave your answer in terms of π .

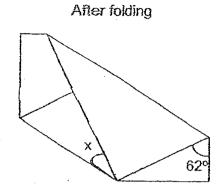
Ans: (b) _____ cm [1]

The average of two different 3-digit numbers is 104. Write down one possible set of values for the two numbers.

Ans: ______, _____

Vinesh has a rectangular piece of paper. He folded it along the dotted lines without overlapping as shown below.

Before folding



Find ∠x.

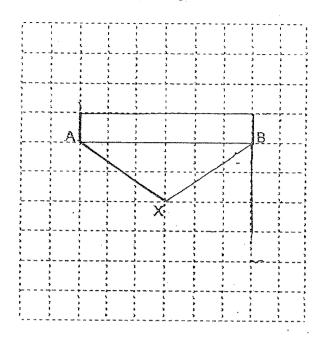
Ans:



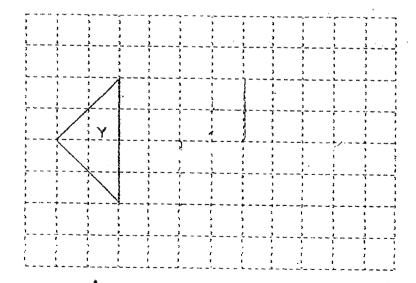
, , , , ,	in brackets [] at the end of each que		(45 marks
	The total mass of three parcels was than Parcel A while Parcel C was 1.3	13.8 kg. Parcel B was 2 kg lighter than Parcel	1.2 kg heavier A.
	(a) How much heavier was Parcel	B than Parcel C?	
		Ans:(a)	[1]
	(b) Find the mass of Parcel A.		
		A (%)) }
		Ans:(b)	[2]

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7 lan drew a triangle ABX in a square grid as shown below.

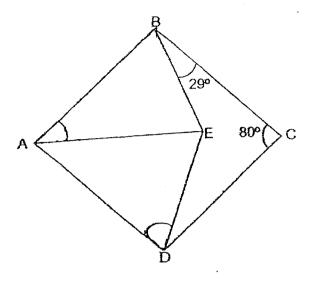


- (a) ABCD is a rectangle with the same area as triangle ABX. Draw ABCD on the grid above such that ABCD does not overlap with ABX. [1]
- (b) ABR is a right-angled triangle. The area of triangle BXR is the same as the area of triangle ABX. Draw ABR on the grid above such that ABR does not overlap with ABCD. [1]
- (c) lan then drew another triangle Y in a square grid as shown below. Draw a parallelogram with the same perimeter as Y. Label the parallelogram P. [1]



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8 In the figure, ABCD is a rhombus and AB = AE.



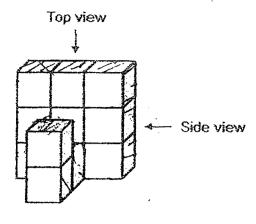
(a) Find ∠BAE.

		10	·
Ans:(a)	 [2	<u>.</u>

(b) Find ∠ADE.

•	Ans:(b)	[2]
	6	4

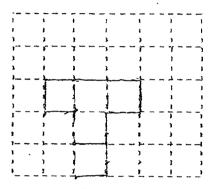
9 Jill glued 12 cubes of side 1 cm to form a solid as shown below.



Front view

(a) On the square grid below, draw the top view of the solid.

[1]



(b) Jill painted the whole solid, including the base. How many cube(s) would have only two painted faces?

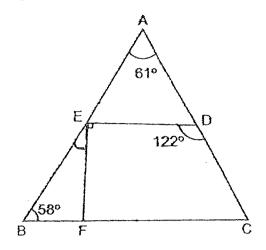
Ans:(b)	11	1
	ī.	1

(c) What was the total painted area of the solid?

Ans:(c)____[1]

3

ABC is a triangle, BFC is a straight line and ZDEF is a right angle.



(a) Find ∠BEF.

Ans:(a)	 [2]
,	 7

(b) Circle the words that describe AED and CDEF correctly in the following statements:

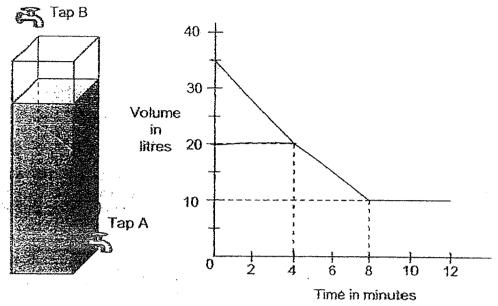
AED (is / is not) an isosceles triangle and AD is equal to (AE / ED).

CDEF (is / is not) is a trapezium and ED (is / is not) parallel to FC.

[2]

At first, 80% of a tank was filled with water. Chris turned on Tap A to allow water to flow out of the tank. 4 minutes later, Chris turned on Tap B to allow water to flow into the tank. After a while, both taps were then turned off at the same time.

The graph below shows the amount of water in the tank over 12 minutes.



(a) Find the capacity of the tank in litres.

Ans:(a)	11
பாலரு	1 3 1

(b) How much water flowed out of the tank from tap A in 1 minute?

(c) How much water flowed into the tank from tap B in 1 minute?

Ans:(c) ______[2]

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12	Sam had a bag of red, blue and green marbles. The ratio of the number of
	red marbles to the number of blue marbles was 2:1. The ratio of the
	number of blue marbles to the number of green marbles was 5:3.

(a)	What fraction	of Sam's	marbles was	green?
-----	---------------	----------	-------------	--------

A	IA	3
Ans:(a)	 [1	3

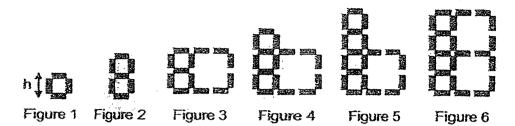
(b) Sam removed 4 red marbles and 3 blue marbles from the bag each time. After a few rounds, there were 18 red marbles and 1 blue marble in the bag. How many red marbles were there in the bag at first?

Ans:(b)	[2]

3	Jani than	ce sold 80 cakes in January. In February, she sold 30 more such cakes in January.
	(a)	What was the percentage increase in the number of the cakes sold from January to February?
		Ans:(a)[1]
	(b)	The number of cakes she sold in March was a 100% increase from what she sold in February. How many cakes were sold in March?
		Ans:(b)[1]
	(c)	Ans:(b)[1] The number of cakes sold in April was a 40% decrease from what she sold in January. The total number of cakes she sold in April and May was 200 when rounded off to the nearest hundred. What was the greatest possible number of cakes she sold in May?
*	-	Ans:(c) [2]
		11

Paul's		Rani
house	Market Stadium	hous
	240 m	
time and they arrived	nd Rani started cycling from their ho at the stadium together. Rani cycl speed 15 m/min faster than Rani.	ouses at the san led at 100 m <i>I</i> m
(a) How much further	er did Paul cycle than Rani?	
·		
		,
	Ans:(a)	I
(b) How far was Rar	ni's house from the stadium?	
	*	

15	Shermaine used rectangular blocks to form figures that follow a pattern as
	shown below. The length of each block is 2 cm and its breadth is 1 cm.



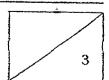
(a) The table shows the number of rectangular blocks used for each figure. Complete the table for Figure 7.

Figure Number	Number of rectangular blocks used	Height of Figure (h)
1	4.	4 cm
2	7	7 cm
3	13	7 cm
4	16	10 cm
5.	19	13 cm
6	23	13 cm .
7	Name de descriptions	cm

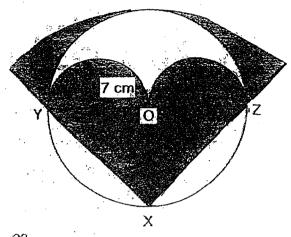
[1]

(b) How many rectangular blocks were used in Figure 123?

Ans:(b) ______[2]



Leon designed a logo as shown. The logo is made up of two identical small semi-circles, a circle and a big quadrant. YZ is the diameter of the circle and O is the centre of the circle. X is the centre of the big quadrant and XY = XZ. The radius of the small semi-circle is 7 cm.



(Take $\pi = \frac{22}{7}$)

(a) Find the length of YZ.

Ans;(a) ______[1]

(b) Find the area of triangle XYZ.

Ans:(b) _____[1]

(c) Find the total area of the shaded parts of Leon's logo.

Ans:(c) _____ [3]

17 In a bakery, donuts and cupcakes are sold only in boxes. A box of 8 donuts costs \$15 and a box of 5 cupcakes costs \$7. Alice and Ben were given a sum of money to buy donuts and cupcakes from the bakery. 1 box of 8 donuts 1 box of 5 cupcakes \$ 7 \$ 15 Alice needed 20 donuts and 3 cupcakes for her party. After buying the donuts and cupcakes from the bakery, Alice passed the rest of the money to Ben. What was the least amount of money Alice spend? Ben spent $\frac{4}{7}$ of the rest of the money to buy donuts and cupcakes for his party and had $\frac{1}{3}$ of the sum of money left. What fraction of the sum of money did Alice spend? Ans:(b) _____[1] How many donuts and cupcakes did Ben buy? Ans:(c) Donuts: ______, Cupcakes: _____[3] **END OF PAPER**

5

Answer

School: Red Swastika School

Level: Primary 6

Term: Preliminary Examination

Subjet: Mathematics

Year:2023

Booklet A

1.	2	2.	1	3.	2	4.	3	5.	3
6.	4	7	2	В.	1	9.	2	10.	4
11.	11	12.	3	13.	4	14.	2	15.	4

Book	<u>let B</u>		
16.	205003	17,	= 60 - 10 + 4 = 50 + 4 = 54
18.	$\begin{vmatrix} \frac{2}{3} \times \frac{18}{1} = \frac{12}{1} \\ = 12 \end{vmatrix}$	19.	5 ÷ 8 = 0.625
20.	(20r + 5r + 7 - r) = $(25r + 7 - r)$ = $(24r + 7)$	21.	a) (k-15) b) $(\frac{45}{n})$
22.	a) 4 b) E and M	23.	a) pyramid b)
24.	a) 0040	25.	220 x 5 = 1100
	b) 2k 45min		1100 ÷ 2 = 550
26.	550 - 220 - 100 = 230	27.	270 - (10 x 3) - (5 x 3) = 240 - 15 = 225 2 + 2 + 1 = 5 5 x 3 = 15 15 + 5 = 20
28.	a) Area of $\Delta = \frac{1}{2} \times 2 \times 1 = 1u$ $\frac{2x1}{2} = 1$ $3 \times 1 = 3$ Ans: $\frac{1}{3}$ b) $\frac{2x1}{2} = 1$ $\frac{2x2}{2} = 2$ $3 \times 3 = 9$ $2 + 1 + 1 = 9$ Ans: $\frac{4}{9}$	29.	10 x 3 = 30 27 ÷ 3 = 9 9 - 3 = 6

30.	
Arrange market	

Pape	<u>r 2</u>		
1.	a) 1, 2 b) 48	2.	a) 2.42 b) 2.42m = 242cm 242cm ÷ 2 = 121cm
3.	a) 4.5cm b) $\pi \times 4.5 = (4.5 \pi)$	4.	(total) = $104 \times 2 = 208$ possible $\rightarrow 1^{st} = 100$ $2^{nd} = 208-100$ = 108 Ans: 100 , 108
Δ,	$2x = 180-28-90=62$ $x = \frac{62}{2}$ =31°	6.	a) 1.2kg + 1.2kg = 2.4kg b) 3u = 13.8kg-(1.2kg x 3) = 10.2kg 1u = 10.2kg ÷ 3 = 3.4kg A = 1u + 1.2kg = 3.4kg + 1.2kg = 4.6kg
7.		8.	a) <abc -="" 180="" 80="" =="" ·="100" ·<br=""><abe -="" 100="" 29="" =="" ·="71" ·<br=""><bae -="" 180="" 71="" =="" ·="" ·<br="">= 38 · b) <ead -="" 38="" 80="" =="" ·="42" ·<br=""><ade -="" 42="" =="" \cdot="" \frac{180="" td="" }{2}="69" ·<=""></ade></ead></bae></abe></abc>
9.	a) b) 2 c) 42 x 1 = 42cm ²	10.	a) <acf -="" -58="" -61="" -90="" 122="" 180="" 58="" 61="" <ade="180" <aed="180" <bef="180" =="" a="" ad="" an="" and="" b)aed="" cdef="" ed="" ed.="" equal="" fc.<="" is="" isosceles="" not="" parallel="" td="" to="" trapezium="" triangle="" ·=""></acf>

2.4	25		
11.	a) $\frac{35}{80}$ x 100 = 43.79 ℓ	12.	a) Total=10u+5u+3u=18u
	b) 35- 20 = 15		$=\frac{3}{18}$
	15 ÷4 = 3.75 ℓ		18
	c) $3.75 \times 4 = 15$		$=\frac{1}{6}$
	15-10=5		
	5÷4 = 1.25 ℓ		b)Ans: 50
			R : B
			-4 -3 18 1 1
			18 1 3
		}	- H : 2
			x +: 36 3+ 2+ xc
			-3 12 ° 9 30 ×
		1	++ +16 +12 +1 : 6 × +1 +32 +24 ->50-27
			2:14
13.	a) $\frac{30}{80}$ x $100 = 37.5\%$	14.	a) 240+240=480m
			b) Time=480÷15=32min
	b) Feb = $80 \div 30 = 110$		Distance=100 x 32
	March = $\frac{110}{100} \times \frac{200}{1} = 220$		=3200m
	c) 100 - 40 = 60		
	April= $\frac{80}{100}$ x $\frac{60}{1}$ =48		
	(biggest) $201 + 48 = 249$		
	Ans: 201		
15.	a)	16.	a) D=7x2=14
	Figure No no of rec (h)		Big D=14x2=28cm
	blk used		b)Big r=28÷2=14
	b)123÷3=41		$\frac{1}{2}$ x 14 x 28=196cm ²
	40 set of 10		1 4
	40 x 10 = 400		c) $\frac{1}{2}x\frac{22}{7}x7x7$
	400 + 13 = 413		=22x7
			=154
			$\frac{1}{4}$ x28x28 = 616
			$\frac{1}{2} + \frac{22}{7} \times 14 \times 14$
			2 7 = 11x2x14 = 308
			308 - 154 = 154
			$616 - 154 = 462cm^2$
·			Jan 101 - FOLLIN
17.	a) 20÷8=2R4		
	$7+15 \times 3 = 52		
	$b)\frac{1}{3} = \frac{3}{9} \text{Ans} : \frac{2}{9}$		
	c) Donuts: 6 x 8 = 48		
	Cupcakes: 2 x 5 = 10		
		L	<u> </u>