

Sanskriti School

Class-V

2021-2022

Maths-The Learning Steps

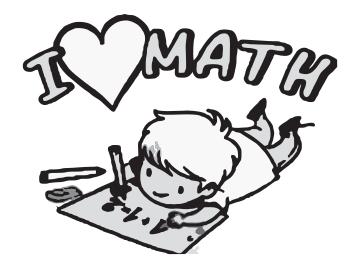


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THE LEARNING STEPS

MATHEMATICS

CLASS - V



INDEX

- A. Fractions
- **B.** Decimals
- C. Lines and Rays
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- H. Percentage
- I. Roman Numerals
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MULTIPLICATION OF FRACTIONS

Multiplication of a fraction by a whole number

Example 1:
$$\frac{3}{4} \times 15 = \frac{3 \times 15}{4} = \frac{45}{4} = 11\frac{1}{4}$$

Find:

(a)
$$\frac{4}{5} \times 25 =$$
 (b) $14\frac{1}{2}$ of $8 =$ _____

(c)
$$6\frac{2}{7}$$
 of $42 =$ _____ (d) $17\frac{1}{2} \times 12 =$ _____



(e)
$$\frac{4}{9}$$
 of 63 = _____

(e)
$$\frac{4}{9}$$
 of 63 = _____ (f) $2\frac{1}{6} \times 72 =$ _____

Multiplication of a fraction by a fraction

Example 1:
$$2\frac{1}{2} \times \frac{1}{3} = \frac{5}{2} \times \frac{1}{3} = \frac{5 \times 1}{6} = \frac{5}{6}$$

1. Find the product:

(a)
$$\frac{5}{3} \times \frac{6}{7} =$$



(b) $5\frac{1}{3} \times$	2		
(0)	3 ^	9	

(c)
$$4\frac{1}{5} \times \frac{40}{9} =$$

(d)
$$6\frac{3}{8} \times \frac{1}{2} =$$



(e) $33\frac{1}{3} \times \frac{30}{7} = -$		

2. Simplify:

(a)
$$2\frac{1}{7} \times 10 \times 14 =$$

(b)
$$\frac{5}{3} \times \frac{1}{25} \times \frac{9}{11} =$$

(c) $\frac{69}{115} \times \frac{25}{23} =$

3. Fill in the blanks:

(a)
$$\frac{1}{17} \times \underline{\hspace{1cm}} = 1$$

(b) Reciprocal of $\frac{7}{5}$ is _____

(c)
$$\frac{18}{7} \times - - = 1$$

(d) Multiplicative Inverse of 42 is _____

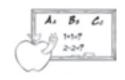
(e) The Multiplicative Inverse of 0 is _____

(f) The reciprocal of ______ is equal to itself.

(g) The reciprocal of a whole number will always be a _____ fraction.

(h) The Multiplicative Inverse of a mixed number will always be a

fraction.



DIVISION OF FRACTIONS

Division of a fraction by a whole number

Example 1:
$$\frac{1}{3} \div 3$$

Example 2:
$$\frac{4}{7} \div 9$$

$$= \frac{1}{3} \times \frac{1}{3}$$

$$=\frac{4}{7}\times\frac{1}{9}$$

$$=\frac{1}{9}$$

$$=\frac{4}{63}$$

Let's Remember

Replace '÷' sign by 'x' sign.

Replace the whole number by its reciprocal.

Solve: 1.

(a)
$$\frac{3}{16} \div 16 =$$

(a)
$$\frac{3}{16} \div 16 =$$
 (b) $\frac{2}{15} \div 6 =$

(c)
$$1\frac{2}{5} \div 2 =$$

(c)
$$1\frac{2}{5} \div 2 =$$
 (d) $5\frac{1}{3} \div 4 =$

(e)
$$6\frac{3}{4} \div 3 =$$
 _____ (f) $\frac{49}{6} \div 35 =$ _____

(f)
$$\frac{49}{6} \div 35 =$$



Division of a fraction by a fraction

Example 1:
$$\frac{1}{3} \div \frac{2}{5}$$

Example 2:
$$\frac{6}{19} \div \frac{12}{38}$$

$$=\frac{1}{3}\times\frac{5}{2}$$

$$= \frac{6}{19} \times \frac{38}{12}$$

$$=\frac{5}{6}$$

Division of a whole number by a fraction

Example 1:
$$4 \div \frac{1}{3}$$

Example 1:
$$16 \div \frac{2}{5}$$

$$= 4 \times 3$$

$$= 16 \times \frac{5}{2}$$

1. Solve:

(a)
$$\frac{6}{10} \div \frac{3}{5} =$$
 (b) $\frac{14}{9} \div \frac{28}{2} =$

(b)
$$\frac{14}{9} \div \frac{28}{2} =$$

(c) $2\frac{1}{7} \div \frac{1}{7} =$ (d) $\frac{17}{23} \div \frac{51}{69} =$

(e) $2\frac{5}{8} \div 2\frac{1}{3} =$ (f) $\frac{12}{11} \div \frac{144}{121} =$



(g)
$$18 \div \frac{1}{3} =$$

(g)
$$18 \div \frac{1}{3} =$$
 _____ (h) $20 \div 1\frac{3}{13} =$ _____

(i)
$$10 \div \frac{5}{6} =$$
 (j) $17 \div 1\frac{1}{2} =$

(j)
$$17 \div 1\frac{1}{2} =$$

(k)
$$25 \div \frac{5}{3} =$$

(k)
$$25 \div \frac{5}{3} =$$
 (j) $8\frac{1}{6} \div \frac{7}{12} =$

Story Sums

1. How many one-fourths are there in 100?

2. $\frac{3}{5}$ of a class of 35 are girls. Find the number of boys in the class.



3. Raj drank some juice from a 500ml bottle. He found that $\frac{2}{5}$ was left. How much did he drink?

4. The distance between two bus stops is 75km. A bus covers 25km in 1hour. What fraction of the distance has been covered? What fraction has to be covered?



DECIMALS

Converting Decimals to Fractions



$$7.1 = 0.40 =$$

Multiplication of decimals with 10, 100 and 1000

8.24	×	10	=	82.4
62.95	×	10	=	
0.675	×	10	=	
36.32	×	10	=	
0.0453	×	100	=	4.53
1.645	×	100	=	
5.004	×	100	=	
70.068	×	100	=	
0.0398	×	100	=	
65.032	×	1000	=	65032
0.0071	×	1000	=	
2310.01	×	1000	=	
0.0002	×	1000	=	
46.91	×	1000	=	



Division of decimals with 10, 100, 1000

123.45	÷	10	=	12.345
55.008	÷	10	=	
0.003	÷	10	=	
7737.02	÷	10	=	
762.1	÷	10	=	
75.03	÷	100	=	0.7503
0.004	÷	100	=	
886.14	÷	100	=	
98.119	÷	100	=	
8975.3	÷	1000	=	8.9753
0.032	÷	1000	=	
835.2	÷	1000	=	
1134.8	·ŀ·	1000	=	



Like and Unlike Decimals

Important points to remember:

- Before adding or subtracting decimals, convert unlike decimals into like decimals.
- Decimals which have the same number of digits after the decimal point are known as **like decimals.**
- Different numbers having different number of digits after the decimal point are known as **Unlike decimals**.



Addition of like decimals:

Addition of unlike decimals:



Subtracting like decimals

Subtracting unlike decimals



Addition and Subtraction of Unlike decimals:

Q1. Add 54.09 and 33.1



Q2. Subtract 900.54 and 214.8

Q3. Find the difference of 649.08 and 146.3



Q4. Find the sum of 164.89 and 79.005 and subtract the sum from 300



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Decimals: Real life applications

Sonia has a 500 rupee note and with that she bought a bunch of flowers for her mother for Rs. 255.75. How much money is left with Sonia?



In a shooting competition, team X scored 243.5 points and team Y scored 195.75 points. By how many points did the winning team win?

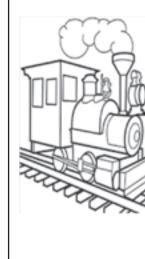


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Sameer spent Rs.450.75 on clothes, Rs.104.25 on books and Rs. 255.65 on chocolates. How much did Sameer spend in total?



Kabir, Aayush and Vivaan are three friends. Each of them has plastic railway tracks that they want to join together and play. If Kabir's track is 3089.05 cms, Aayush's track is 1454.63 cms and Vivaan's track is 779.42 cms long, what is the total length of the railway track that they have joined together?



MULTIPLICATION OF DECIMALS





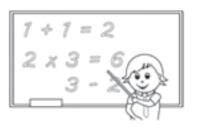
DIVISION OF DECIMALS

(a) Divide 6.65 by 5

(c) Divide 67.24 by 4

(b) Solve: $80.4 \div 2$

(d) Solve: $22.77 \div 11$



DECIMAL: WORD PROBLEMS

Q1. A child spends Rs. 10.50 every day in his school canteen. How much does he spend in a fortnight?



Q2. If Kalpana purchased 12.5 kg of sugar for Rs. 291.25, find the cost of 1 kg and hence find the cost of 3.5 kg





Q3. Sabrina drinks 2.85 litres of milk every day. How many litres of milk does she drink in a month? (Hint: Take 31 days in a month)



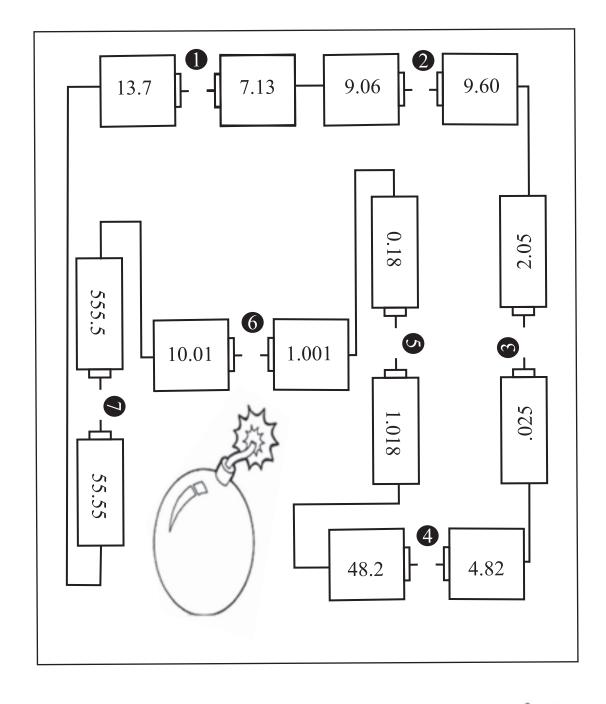
Q4. Rahul spent Rs.750.60 on 15 books. How much did he pay for each book?

28





Comparing Decimals: Please complete the circuit by putting a > (greater than) or < (less than) sign, whenever you see a blank space between two batteries.





Match the following fractions with the decimals Help me find the missing card! 0.5 0.1 0.9 0.25 0.7 0.6 0.75 0.3 3/4 10 10

Angles

Fill in the blanks 1.

- The common starting point of two rays which make an angle (a) is the _____ of the angle.
- The rays that form an angle are the ______ of that angle. (b)
- When two rays starting at the same point lie over each other, (c) the angle between them is _____. If one ray makes a full turn around the other, it makes an angle of _____.
- An acute angle is less than _____. (d)
- An obtuse angle is greater than _____ and less (e) than ______.
- A _____ angle looks like the letter 'L'. (f)
- The angle between _____ lines is 90° (g)
- Write the type (acute, obtuse, etc.) of the angle. 2.
 - (a) 90° (b) 6° (c) 105°
- (d) 99°
- (e) 180° (f) 75° (g) 170°
- (h) 360°
- (i) 25° (j) 136° (k) 10°
- (l) [100°

- (m)
- (n)

(0)

(p)





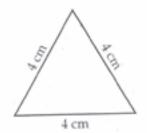




Triangles

Tick the correct option. 1.

(a)



equilateral

isosceles

right-angled

(b)



equilateral

isosceles

right-angled

acute-angled

(c)



equilateral

obtuse-angled

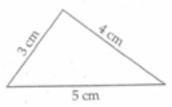
(d)



acute-angled

obtuse-angled right-angled

(e)



obtuse-angled

scalene

isosceles

equilateral

(f)



acute-angled

obtuse-angled

equilateral

right-angled

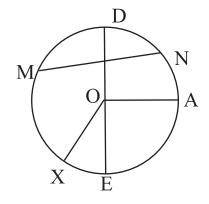
CIRCLES

Q1. Fill in the blanks:

- a) A line segment from the center of a circle to any point on the boundary of the circle is called_____.
- b) The line segment from one point on the circle to any other point on the circle is called ______.
- c) The ______ is the longest chord of the circle, which passes through the center of the circle.
- d) The radius is ______ of the diameter.
- e) A circle with diameter 9 cm will have radius of _____ cm.
- f) A circle with radius 6.5 cm will have diameter of _____cm.
- g) An ARC is written with _____ capital letters on the boundary of the circle.
- h) The boundary of the circle is also called the _____ of the circle, which tells us the perimeter of the circle.

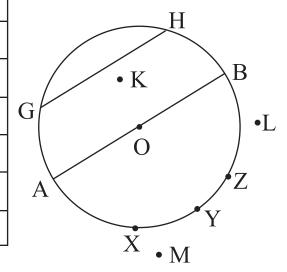
Q2. Complete the table:

Parts of a circle	Number	Label
Radii		
Diameter		
Chords		





Parts of the circle	Number	Label
Radii		
Diameter		
Arc		
Interior points		
Exterior points		
Chords		



Q4. Construct a circle of radius 3.5cm. On the circle, mark:

- 1) Radius OA
- 2) Diameter LM
- 3) Chords PQ, RS
- 4) Interior points D, W
- 5) Exterior points F, T



Q5. Construct a circle of radius 2.5cm. On the circle, mark:

- 1) Diameters PQ, RS
- 2) Chords PM, ST
- 3) Arc XYZ
- 4) Radius OV

Q6. Construct a circle of diameter 6 cm. On the circle, mark:

- 1) Arc PQR
- 2) Diameter LM
- 3) Chords HJ, MN
- 4) Interior point: X
- 5) Radii OS, OF

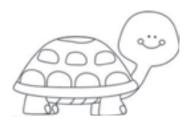


SIMPLIFICATION

Simplify using DMAS rule:

a)
$$10 + 8 \times 2 - 12 + 27 \div 9 - 16 \div 2$$

b)
$$8+4\times 3-3+1-16 \div 4-6$$



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c) $75 \times 3 + 48 \div 4 - 108$

d)
$$102 - 12 \times 6 + 12 \div 2$$

e) $24 \div 8 + 3 \times 3$



2. Fill in the blanks using $(\div, \times, +, -)$:

a)
$$3 \times 4 _{2} 2 = 10$$

b)
$$6 \div 3 _{\underline{}}6 = 12$$

c)
$$21 \underline{\hspace{1cm}} 3 + 11 = 18$$

d)
$$63 \div 3$$
 _____ $21 = 0$

3. Simplify using BODMAS rule:

a)
$$17 + \left[11 - \left\{8 + 3 - \left(\frac{1}{2} \text{ of } 6 + 7 - 2 \times 4\right)\right\}\right]$$



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b) $4[100 - \{80 \div (20 \times 2)\}] + 3$

c)
$$30 \div [4 + \{5 + 7(12 \div 4)\}]$$



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d) 23 - [23 - {23 - (23 - 23 + 23)}]

e)
$$20 + 4 [3 \{16 \div 2 (12 - 4 \times 2)\}]$$



MENTAL MATHS CORNER

Tick the correct answer: 1.

a)
$$30 \times 8 \div 2 + 60 - 22 =$$

i 158

ii. 168

iii. 185

iv. 142

b)
$$95 - 75 \div 5 + 60$$

i 150

ii. 70

iii. 140

iv. 80

c)
$$5+10 \div 5 \times 3-6$$

c) $5+10 \div 5 \times 3-6 =$

i 6 ii. 5

iii. 4

iv. 2

d)
$$[4\{(88+2) \div 9\}] - 25 =$$

i 10

ii. 15

iii. 20

iv. 25



2. Fill in the blanks:

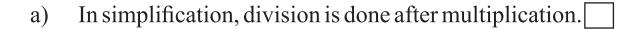
a)
$$100 \div 10 + 2 - 10 =$$

b)
$$105 - 45 \div 3 + 15 \times 2 =$$

c)
$$8 \div 8 \times 8 + 8 - 8 =$$

d)
$$5-20+3\times10\div2$$
 =

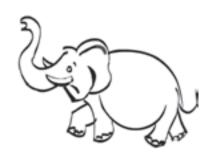
3. Write true (T) or false (F):



b)
$$6+63 \div 3 - 3 \times 6 = 9$$

c)
$$\{6 \times (7-2)\} \div 3 = 10$$

d)
$$15 \times 2 + 120 \div 20 - 6 = 36$$



AREA AND PERIMETER

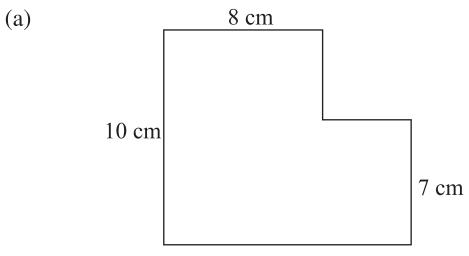
TERMS TO REMEMBER:

Perimeter: Perimeter is the sum of all the sides.

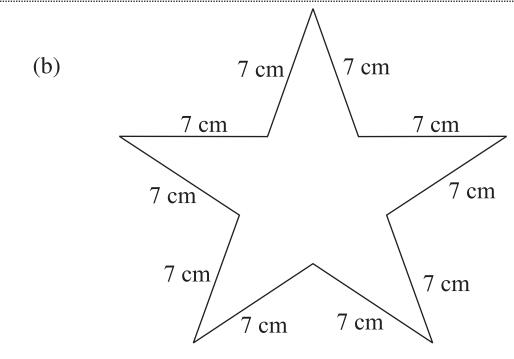
Area: The amount of area enclosed by a closed figure is called its area.]

Let's Practice

1. Find perimeter of the following:

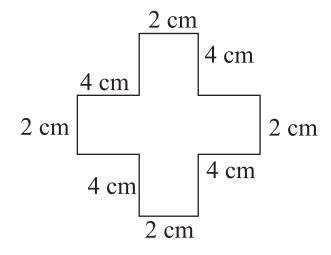


10 cm

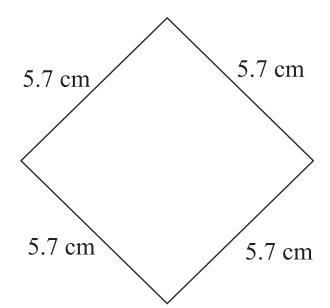


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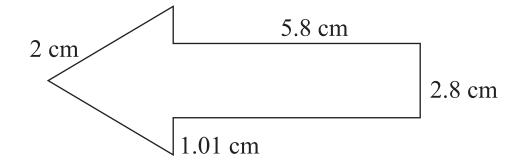
(c)



(d)



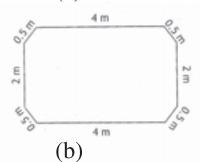
(e)

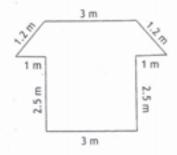


EXERCISE-105

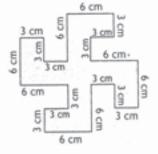
1. Find the perimeter.

(a)

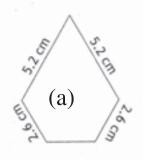




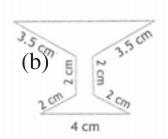
(c)



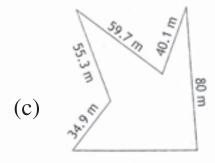
2. Fill in the missing measurement.



Perimeter = 18 cm



Perimeter = 26 cm



Perimeter = 340 m

- 2. Find the area of a square with sides:
 - a) Side = $40.7 \,\mathrm{m}$

b) Side = $6.4 \, \text{cm}$

c) Side = $14.6 \,\mathrm{m}$



3. Find the area of rectangle with sides:

(a) Length =
$$13.7 \text{ cm}$$
 Breadth = 4.5 cm

(b) Length =
$$5.6 \text{ cm}$$
 Breadth = 2.9 cm

(c) Length =
$$30.9 \,\mathrm{m}$$
 Breadth = $9.35 \,\mathrm{m}$



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4.	Read the following statements carefully and write whether you
	will find the area or the perimeter to find the answer:

- a) To put tiles on the floor of a room.
- b) To jog around a park._____
- c) To put lace along the sides of a tablecloth.
- d) To cover a wall with wallpaper.
- 5. I want to put lace around a rectanguar tablecloth of length 4.5 m and breadth 3 m. How many metres of lace will I need?



6.	A rectangular park has length 30m and breadth 22m. How much
	distance does Rahul cover to complete 3 rounds of the parks

7. A rectangle has length 50cm and breadth 45cm. A square has each side 48 cm. Which has more area and by how much?

PROFIT AND LOSS

TERMS TO REMEMBER:

Cost Price: The cost at which an item is bought is called its Cost Price. Overhead charges like transportation costs, labour costs, repairing costs, repairing costs are added to the Cost Price (CP).

Selling Price: The cost at which an item is sold is called its Selling Price.

Profit: When the Selling Price (SP) of an item is more than the Cost Price (CP) of the item, the shopkeeper makes a profit or gain.

Loss: When the Cost Price (CP) of an item is more than that of the Selling Price (SP), the shopkeeper makes a loss.

- 1. Find the Prof it or Loss in the following:
 - a) Mr. Sharma bought a laptop for Rs 36,250 and sold it for Rs 32,500.
 - b) A shopkeeper bought a shirt for Rs 700 and sold it for Rs 670.
 - c) Rajni bought a necklace for Rs 9,999 and sold it for Rs 9,000.
 - d) Pankaj bought a fan for Rs 1,250 and later sold it for Rs 1,070.

(50)



CLASS -

2. Find the profit and loss:

Item	Cost Price (Rs)	Selling Price (Rs)	Profit (Rs)	Loss (Rs)
Toy	190	183		
Fruits	92	99		
Pen	23	21		
Jam Bottle	78	84.50		
Oil	103	112		

3. Fill in the blanks:

a)	Profit = SP	
\sim		

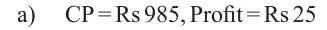
b)	If $SP = Rs. 670$ and $loss = Rs. 50$, then $CP = $

c)	If $CP = Rs 6070$, $SP = Rs 7060$, then profit =

d) If
$$CP = Rs 900$$
 and profit is $Rs 150$, then $SP =$



4. Find the SP:



b)
$$CP = Rs 828, Loss = Rs 50$$

c)
$$CP = Rs 805, Profit = Rs 5$$

5. Find the CP:

a)
$$SP = Rs 2725, Profit = Rs 550$$

b)
$$SP = Rs 4475, Loss = Rs 25$$

c)
$$SP = Rs 6874, Loss = Rs 576$$

6. Ramesh bought 40m rope for his shop at Rs 30 per meter and sold it for Rs 35 per meter. What is his gain or loss?

7. Murali bought a motorbike for Rs 35,400. He spent Rs 1200 on its accessories. He later sold the motorbike at a loss of Rs 6588. Find the SP of the motorbike.



8. A man bought a second hand scooter for Rs 8000. He spent Rs 700 on repairing and Rs 350 on re-painting. He then sold it for Rs 9500. How much did he gain or lose?

9. Vicky bought 20 pens and sold them at Rs 5 each. If he had paid Rs 85 for the pens, what was his profit or loss?



10. Mahesh bought a bicycle for Rs 2290. He sold it for Rs 1600. Find his profit or loss.

11. Mrs. Goswami bought a calculator for Rs 538. She spent Rs 90 on its repairs. She later sold it for Rs 640. Did she make a profit or loss and by how much?



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PERCENTAGES



A. Convert the given fractions into percentage:

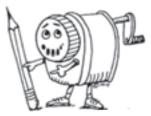
a)
$$\frac{2}{5} = \frac{2}{5} \times 100 = 40\%$$

- b) $\frac{7}{8}$
- c) $\frac{3}{20}$
- d) $\frac{18}{25}$
- e) $\frac{1}{4}$
- f) $\frac{11}{10}$



B. Convert decimals into percentages:

$$3.5 = 3.5 \times 100 \% = 350\%$$



Sharpen Your Skills

- a) 55.7
- b) 6.09
- c) 0.075
- d) 14.16
- e) 0.001
- f) 8.5
- g) 133.46
- h) 0.078
- i) 5.125



C. Convert percent into decimals

 $5\% = \frac{5}{100} = 0.05$

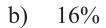
- a) 1%
- b) 8%
- c) 14%
- d) 15%
- e) 35%
- f) 40%
- g) 0.73%
- h) 0.0667%
- i) 0.48%



D. Convert percent into fractions and reduce the fraction to the lowest form:

$$11\% = \frac{11}{100}$$

a) 5%



c) 18%

- e) 50%
- f) 75%



E. What is the percentage of a given number?

a)
$$25\% \text{ of } 50 = \frac{25}{100} \times 50 = 12.5$$

- b) 12% of 40
- c) 10% of 75
- d) 16% of 100
- e) 70% of 200
- f) 25% of 600



Word problems in percentages:

a) In a club election, 72% of the members voted. If there are 200 members in the club, what is the number of members who voted in the elections?



b) Mr Gupta has filled 12 *l* of petrol in his car. If 25% of the petrol is consumed how much petrol still remains?







c) Radha brought 90 apples from the market. 30% of the apples were rotten. Find the number of rotten and fresh apples. Also find the % of fresh apples.

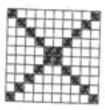


d) Sumesh got 285 marks in his first term examination out of a total of 300 marks. Calculate his percentage marks in the first term examinations.

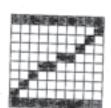


What percentage is shaded?

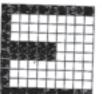
(a)



(b)

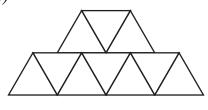


(c)



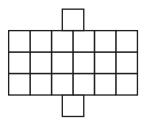
Colour the given percentage. 2.

(a)



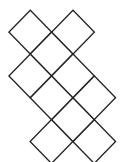
60%

(b)



40%

(c)



80%

What percentage is shaded? 3.

(a)



 $\frac{2}{5} = \frac{2}{5} \times \frac{100}{100}$

$$= \frac{2 \times 100}{5} \times \frac{1}{100}$$
$$= 40 \times \frac{1}{100} = 40\%$$

(d)



(b)



(c)



 $= \frac{2 \times 100}{5} \times \frac{1}{100}$

(e)



(f)



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Measurement

1.	Encircle the correct answer from the given alternative answers: (a) 38 g when expressed in kg is (i) 0.38 kg (ii) 0.038 kg (iii) 3.8 kg (iv) 0.380 kg
	 (b) Weight of 1 apple is 250 g. Weight of such 5 apples will be (i) 2.5 kg (ii) 12.5 kg (iii) 1.250 kg (iv) 50 g
2.	Convert:
	(a) 5328 g into kg and gkgkgkgkg
3.	A woman weighs 59.350 kg. She reduces her weight by 9.870 kg. What is her reduced weight?kg
4.	Shruti bought 1.05 kg tomatoes. She told her mother that she bought 150 g tomatoes was she right? If not what should be the correct answer?
5.	Which of these could be the correct weight? Write yes or no against each statement: (a) Weight of an apple is 7 kg. (b) Weight of your textbook is 0.2 kg. (c) Weight of mobile phone is 97.5 g. (d) Weight of a spoonful of sugar is 5 g.

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1	- $ -$	1:	41	1_1	a 1
1	$-$ H $_{11}$	ıın	ine	nı	anks:

- (a) Distance between two cities is measured in
- (b) Length of a playground is measured in
- Length of the cover of mathematics book is measured in
- (d) Length of a pencil sharpener is measured in
- 2. Arushi bought 10 m 45 cm cloth for her dress and 6 m 95 cm cloth for her brother's dress. How much cloth did she buy?
- 3. Rohit lives at a distance of 15 km from his school. He travels 12 km 350 m by bus and the remaining distance by car. How much distance does he travel by car?

4. Express as required:

- (a) $\frac{1}{2}$ km = _____ metres
- (b) $5 \text{ m } 15 \text{ cm} = \underline{\hspace{1cm}} \text{cm}$
- (c) $\frac{3}{4}$ m = _____ cm
- (d) $2500 \,\mathrm{m} = \underline{\hspace{1cm}} \,\mathrm{km} \,\underline{\hspace{1cm}} \,\mathrm{m}$

5. Encircle the correct answer from the given alternative answers.

- (a) Length of a cricket bat is approximately
 - (i) 1 m
- (ii) 5 km
- (iii) 20 m
- (iv) 50 cm

The height of a neem tree is (b)

- (i) 14 mm (ii) 14 m
- (iii) 14 cm (iv) 14 km

Date		
D G 1 C	•	

1. Tick the correct measure:



5 m*l* 100 m*l*



2 *l* 20 *l*



250 m*l* 50 *l*



25 *l* 250 *l*

2. Answer the following:

- (a) How many times 500 ml container will be used to measure 1l 500 ml petrol?
- (b) How many times 200 ml and 50 ml containers will be used to measure 700 ml milk?
- 3. Kavita put 45 litre petrol in her car.

She used 33 *l* and 300 m*l* petrol. Hovv much petrol is in her car now?

l _____ l ____ ml

4. Add: 29 *l* 400 m*l* and 31 *l* 800 *ml*.

- 5. Encircle the correct answer from the given alternative answers.
 - (a) 25 l 30 ml is equivalent to
 - (i) $25300 \,\mathrm{m}l$

(ii) $25003 \,\mathrm{m}l$

(iii) 25030 m*l*

- (iv) 2530 m*l*
- (b) 12l 500 ml oil is put in 5 bottles. Each bottle contains
 - (i) 2 *l* 50 *ml*

(ii) 2 l 500 ml

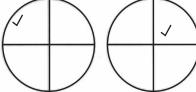
(iii) 2 *l* 5 *ml*

(iv) 2 *l* 300 m*l*

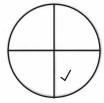
Activity-1

Complete the given patterns.















(b)



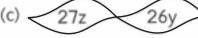








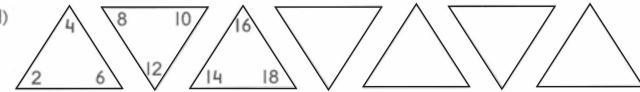








(d)



(e)













(f)



(g)



(h)

Activity-2

1. Secret Messages

A	В	C	D	Е	F	G	Н	I	J	K	L	M	N	О	P	Q	R	S	T	U	V	W	X	Y	Z
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26

Example: 19, 3, 8, 15, 15, 12 = SCHOOL

- 2. Read the secret messages.
 - (a) 9 21, 14, 4, 5, 18, 19, 20, 1, 14, 4 =
 - (b) 20, 15, 4, 1, 25 9, 19 8, 15, 12, 9, 4, 1, 25 =
 - (c) 20, 5, 1, 3, 8, 5, 18 9, 19 3, 15, 13, 9, 14, 7 =
- 3. Write the secret messages.
 - (a) ASSEMBLY IS OVER =
 - (b) GOOD MORNING =
 - (c) PRINCIPAL IS COMING =
 - (d) HE IS READING =

Activity-3

Let us take a calendar (of any month and of any year).

Mon	Tue	Wed	Thu	Fri	Sat	Sun
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

Let us make a 3×3 box (9 dates) on the calendar.

[The sum of all the numbers in the box] = $9 \times$ [middle number]

Here, we have:

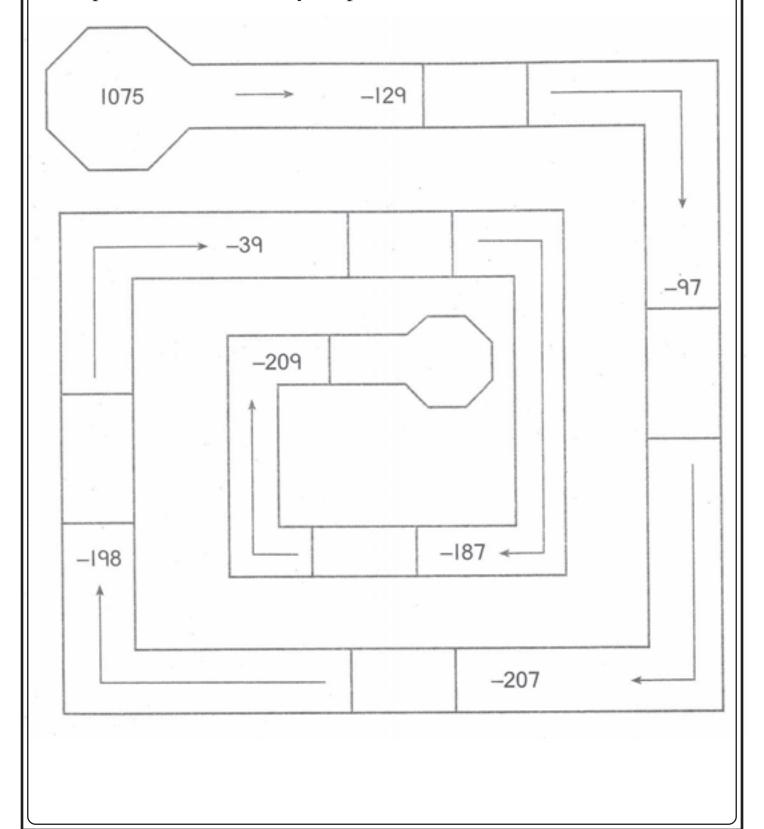
$$[10+11+12+17+18+19+24+25+26] = 9 \times [18]$$

$$=162 = 162$$

We can choose any 3×3 box from a calendar and find the total in the same way. Play it with your friends.

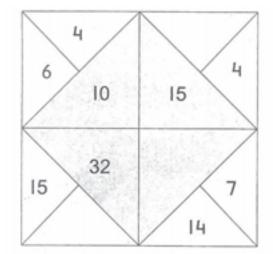
Fun with Numbers

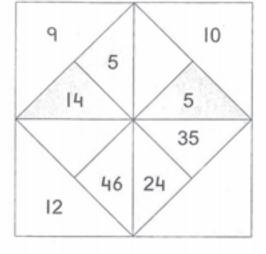
Move along the arrow (\longrightarrow) . Subtract each time and reach the centre. Complete all the boxes in your path.

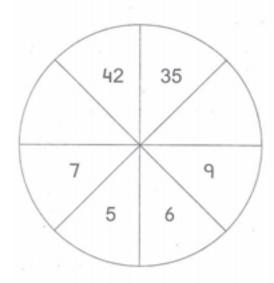


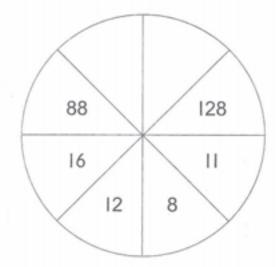
Fun with Numbers

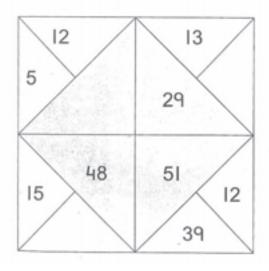
Observe and find the missing number carefully in each of the following.

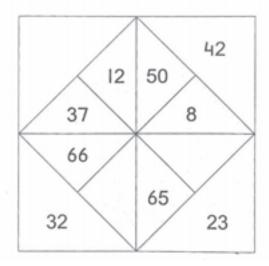


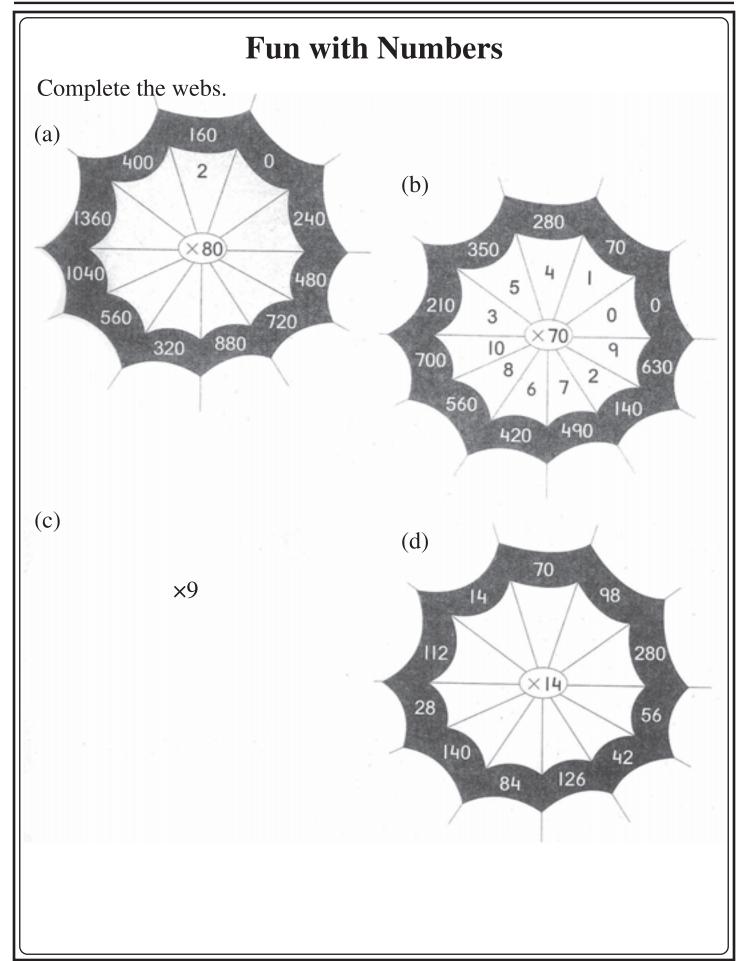












Date : _____

Fun with Numbers

Look at the 3×3 box on the following calendars and fill in the blanks.

(a)	S	1	8	15	22	29
	M	2	9	16	23	30
	T	3	10	17	24	31
	W	4	11	18	25	
	Th	5	12	19	26	
	F	6	13	20	27	
	S	7	14	21	28	

Since, $18 \times 9 = 162$, Therefore, sum of all the numbers in the 3×3 box =

(b)	S	1	8	15	22	29
	M	2	9	16	23	30
	T	3	10	17	24	31
	W	4	11	18	25	
	Th	5	12	19	26	
	F	6	13	20	27	
	S	7	14	21	28	

Since, $23 \times 9 = 207$, Therefore, sum of all the numbers in the 3×3 box =

(c)	S	1	8	15	22	29
	M	2	9	16	23	30
	T	3	10	17	24	31
	W	4	11	18	25	
	Th	5	12	19	26	
	F	6	13	20	27	
	S	7	14	21	28	

Since, $19 \times 9 = 171$, Therefore, sum of all the numbers in the 3×3 box =

(d)	S	1	8	15	22	29
	M	2	9	16	23	30
	T	3	10	17	24	31
	W	4	11	18	25	
	Th	5	12	19	26	
	F	6	13	20	27	
	S	7	14	21	28	

Since, $20 \times 9 = 180$, Therefore, sum of all the numbers in the 3×3 box

Data Handling

1. Look at the table and answer.

Transport to school	Boys	Girls
	240	180
	90	95
(21) ·	175	200
did	171	33
& -	124	92

- (a) How many children go to school by car?
- (b) How many less girls walk to school than boys?
- (c) How many more boys go by bicycle than girls?
- (d) What is the most-used form of transport?____
- (e) What percentage of the children use it?
- 2. The chart shows the number of wickets taken by a bowler in twenty one-day matches. Fill the table and answer the questions.

Number of wickets 0, 1, 3, 1, 5, 4, 7, 3, 0, 1, 4, 3, 3, 1, 2, 5, 3, 6, 2, 3

Number	Number
of wickets	of times
0	
1	
2	
3	
4	
5	
6	
7	

- (a) What was the highest number of wickets taken in a match?
- (b) How many wickets did he get most often?
- (c) In how many matches did he get five or more wickets?
- (d) In what percentage of the matches did he not get wickets?

Pictorial Representation of Data

Data can be defined as a 'collection of information in the form of numerical figures'.

Pictographs

Where we give information (data) about a quantity through pictures, it is called a pictograph. These pictographs can be graphs, carts or tables. They simplify a large group of data.

Example 1: A group of 120 children gave their preference of shapes. The data is given below. Represent this information using a pictograph.

Smiley design = 40

Sun design = 30

Stardesign = 50

<u> </u>	34114461811 60	S tul 40
Smiley	Sun	Star

Here, each picture = 10 units

- a. How many more children like the star design as compared to the sun design?
- b. Which design do the least number of children like?
- c. Which design do the most number of children like?
- d. Are more children happy with a smiley design or a sun design?

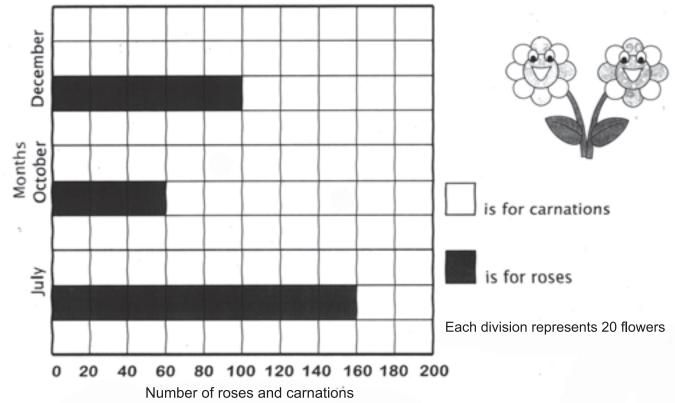
Bar and Column Graphs



When we give information (data) about a quantity through horizontal bars or vertical columns the graph is called a bar graph or a column graph respectively. They help us to understand the number or quantity being talked about. A bar graph and column graph can show more than one set of data.

Look at the example below.

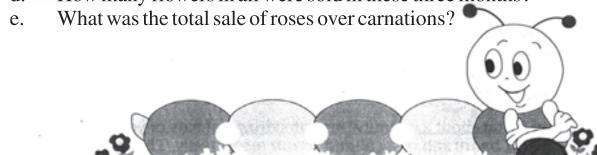
Example 2: This is a bar graph to show the total sale of roses and carnations at a florist's shop in the months of July, October and December.



It is very important to note that when large quantities are being talked about, then one column or square or unit of a graph may be used to represent a certain quantity and not just one. Like, in the above example, each division represents 20 flowers.

By reading the above graph, we can easily answer questions like:

- a. How many more roses than carnations were sold in July?
- b. How many carnations were sold in October?
- c. In which month were the most roses sold?
- d. How many flowers in all were sold in these three months?



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Data Handling

The government collects data or information and presents it in the form of bar graphs, circle graphs and line graphs.

You too, can learn to read data, record it and present it through pictographs, bar graphs and line graphs.

Examples: At the Annual Diwali Mela, Class V was incharge of the games section. This is how they recorded data in the from of a pictograph.

Games	Nui	mber	ofpe	eople	who	part	icipa	ted	
Ringing the bottle	0	0	0	0					
Dart board	0	0	0	0	0	0	0	0	
Throwing the ball	0	0							
Ringing the prizes	0		0					0	
Estimating weight	0	0							

• Stands for 50 people.

Horizontal graph of number of people who participated.

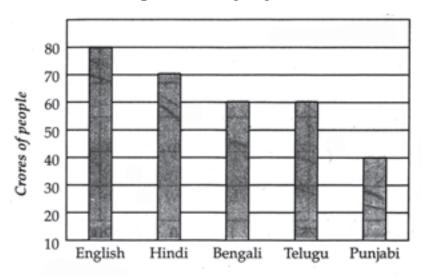
Games	Number of people who participated							
Ringing the bottle								
Dart board								
Throwing the ball								
Ringing the prizes								
Estimating weight								

 $0\ 50\ 100\ 150\ 200\ 250\ 300\ 350\ 400\ 450\ 500$

- 1. How many people took part in the game ringing the prizes? _____
- 2. Which game was least popular?_____.
- 3. Which game was most popular?_____.
- 4. How many people tried the dart board?
- 5. Ringing the bottle, was more popular than 'throwing the ball' by approx people.

READING GRAPHS Vertical bar graphs

Most spoken Languages in India



Study the bar graph and answer the questions.

- 1. Which is the most spoken language in India?
- 2. About how many people speak Punjabi?_____
- 3. Is Hindi more popular than English?
- 4. About how many people speak Bengali and Telugu?
- 5. What is the approximate number of people who speak English?



ROMAN NUMERALS

There are seven basic Roman numerals. These are: I V X L C D M

The ten basic Indo-Arabic numerals are: 1, 2, 3, 4, 5, 6, 7, 8, 9, 0

All other numerals are formed using these basic numerals.

Some basic Roman numerals and their Indo-Arabic equivalents are:

Roman Numerals I V X L C D M

Indo-Arabic values 1 5 10 50 100 500 1000

Rules for Writing Roman Numerals



We follow some basic rules for writing Roman numerals. These are:

Rule1: The 7 basic symbols can be used in different combinations involving addition or subtraction to form numbers.

Example 1: II =
$$1+1=2$$

$$XX = 10 + 10 = 20$$

$$IV = 5-1 = 4$$



Rule2: Symbols I, X, C, M can be repeated 3 times at any one given time. Symbols V, L, D can be used only once at any one instance.

Example 2: III =
$$1+1+1=3$$

$$XXX = 10 + 10 + 10 = 30$$

$$CCC = 100 + 100 + 100 = 300$$

$$MMM = 1000 + 1000 + 1000 = 3000$$



Only I, X, C are used for both addition and subtraction.

Rule 3: When the smaller symbol is placed on the right of the bigger symbol, then we ad the symbols.

Example 3: XI = 10+1=11

CX = 100 + 10 = 110

MC = 1000 + 100 = 1100

Rule 4: When the smaller symbol is placed on left of the bigger symbol, then we subtract.

Example 4: IX = 10 - 1 = 9

XC = 100 - 10 = 90

MC = 1000 - 100 = 900

Rule 5: Symbol I can be added or subtracted from the next two symbols V, X only.

Example 5: IV = 5 - 1 = 4

VI = 5 + 1 = 6

IX = 10-1=9

XI = 10 + 1 = 11

Rule 6: Symbol X can be added or subtracted from the next two symbols L, C only.

Example 6: XL = 50 - 1 = 40

LX = 50 + 10 = 60

XC = 100 - 10 = +90

CX = 100 + 10 = 110

Rule 7: Symbol C can be added or subtracted from the next two symbols D, M only.

(80)

Example 7: CD = 500 - 100 = 400

DC = 500 + 100 = 600

CM = 1000 - 100 - 900

MC = 1000 + 100 = 1100

Date		
Date	•	

A. Write the Roman numerals for the following.



$$6. 71 =$$

$$7. \quad 500 =$$

9.
$$55 =$$



B. Write the Indo-Arabic numerals for the following.

Reading Larger Roman Numerals



To understand bigger Roman numerals, we follow the rules and break the number up like this:

Example 8: Write in Indo-Arabic numerals.

CMLXXXII

Step 1:

CM + LXXX + II

Step 2:

CM = 1000 - 100 = 900

Step 3:

LXXX = 50 + 10 + 10 + 10 = 80

Step 4:

II = 1 + 1 = 2

Therefore

CMLXXXII = 900 + 80 + 2 = 982

Date	:	

A. Write the Indo-Arabic num	erals for the following.	
1. MCMXLIV	2. MMCDXX	3. LXXIX
3. MCMV	5. CCXCIX	6. MMCDXX
7. DCCLXVI	8. MDXXV	9. MMCDLIX
B. Write the Roman numerals	for the following.	
1. 2010	2. 2534	3. 3250
3. 1971	5. 1603	6. 2006
7. 1954	6. 1320	9. 2919
C. Cross out the wrongly writt	en Roman numerals.	
1. VVV	2. XI	3. LLIV
4. XM	5. CCCL	6. DDD
7. XXII	8. LC	9. ICC
10. CCCVI	11. MCCCIX	12. XLIX

Date : _____



Match the following Roman numerals with the Indo-Arabic numerals.

1.	XXXIX	1344

2.	DCCLXVIII	1250
	DCCLITTI	1200

7.	MMCCCXXII	768

8. CMLXXVIII 10	09
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Enrichment Activities Activity 1

READY FOR A CHALLENGE? Find the value of each icon.



+



+



= 33



+







+ 7 +





+



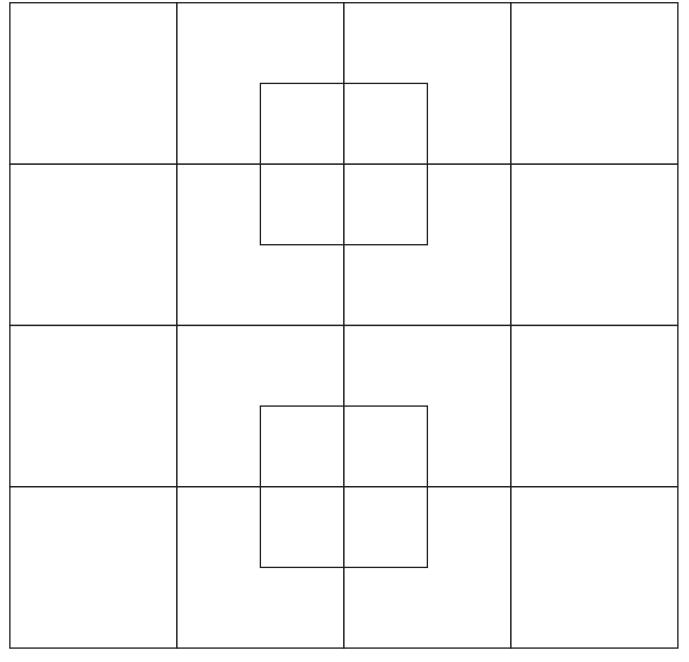
+



= ?

Activity 2

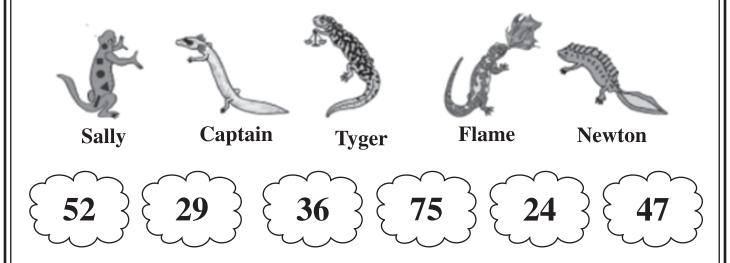
How Many Squares Are There?



Total number of Squares = _____

WHO CHOSE WHICH? Activity 3

Sally, Captain, Tyger, Flame and Newton all chose a different number from the list below.



Use the clues below to work out which number each of them chose, and which number was not chosen by any of them.

- Flame's number was even and it was not the smallest number.
- The salamander who chose the smallest number was not the Captain or Newton.
- Captain's number was odd, but it was not prime.
- Sally chose a number that was divisible by both 4 and 6.
- Newton's number is a multiple of 13.
- Tyger's number was larger than the average.

Cam you make up your own number problem with clues like these?

Ordering Objects Activity 4

Arrange each list in order according to the directions above it. Write '1', '2' '3', '4' or '5' on the line before the word.

1. From heavy to light

____table

_____ pin

_____tennis boll

_____chair

_____ pencil

2. From small to large

_____ large plate

_____ saucer

_____ small button

_____ telescope dish

_____large button

3. From slow to fast

____ cat

____ mouse

_____cheetah

_____ snail

____ horse

4. From short to tall

_____ giraffe

____ man

_____ Tyrannosaurus Rex

_____ monkey

_____ camel

5. From near to far

____ city centre

_____ neighbours

_____ the South Pole

_____ Japan

_____ Planet Saturn

6. From cold to hot

_____ boiling water

_____ ice

____ worm milk

_____ocean water

_____ fire

Communication Ideas Activity 5

Do the following exercise.

The primary 4 children at five schools (Latham, Potts, Hawke, Malba and Flynn) were surveyed to see how many hours of TV they watched each week, on average. The boys from Latham watched 11 hours. while the girls watched 17 hours (as shown below).

Using a red pencil for boys and a blue pencil for girls, colour the graph to show the following information.

Potts: boys watched 8 hours. girls watched 10 hours. Hawke: boys watched 12 hours, girls watched 7 hours. Melba: boys watched 13 hours, girls watched 15 hours. Flynn: boys watched 18 hours, girls watched 8 hours. Flynn: boys watched 18 hours. girls watched 8 hours.

	20										
	19										
	18										
	17										
	16										
*	15										
wee	14										
าลา	13										
Hours of TV watched in a week	12										
tche	11										
waj	10										
\mathbf{TV}	9										
s of	8										
onic	7										
Ĥ	6										
	5										
	4										
	3										
	2	B G	В	G	В	G	В	G	В	G	
	1	Latham		tts		wke	Me		Fly		

Pets Logic Puzzle Activity 6

Four children have different pets. Find out who had which one.

	Bird	Cat	Dog	Fish
Ritu				
Bali				
Krish				
Diya				

- 1. Bali's pet can't fly.
- 2. Krish's pet has hair, so does Diya's.
- 3. Diya's pet doesn't bark.

Time Logic Puzzle Activity 7

Four children have four different doctor appointments. Read the clues to find out who had the first, second, third, and fourth appointment

	1:00	2:00	3:00	4:00
JIYA				
KALI				
AMAR				
BELA				

- 1. Jiya's appointment is after those of Kali and Bela.
- 2. Bela's appointment is before Kali's.
- 3. Amar's appointment is after Jiya's.

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Date	
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BIRTH MONTH LOGIC PUZZLE Activity 8

Four children have different birth months, but were all born in the same year. Find out who was born in each month.

	January	February	March	April
Arun				
Biku				
Chaya				
Domu				

- 1. Chaya was born before Damu.
- 2. Damu was born two months after Biku.
- 3. Biku was born after Arun but before Chaya.

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Date	
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GEOGRAPHY LOGIC PUZZLE Activity 9

Four children were born in different countries. Find out who born in which country from the clues given.

	Fronce	United Kingdom	USA	Argentina
Ann				
Ben				
Cal				
Deb				

- 1. Ann was not born in Europe.
- 2. Deb's native language is not English.
- 3. Ben is not from the Americas.
- 4. Cal is not from the Northern Hemisphere (the Northern Hemisphere is the area north of the equator).

Logical Reasoning Activity 10

Answer the questions

1. Alisha walked 20 kms to the east, then turned left and walked 15 kms. She then turned west and walked 45 kms. She again turned left and walked 15 kms. How far is she from her house?

Choose correct answer(s) from given choice

2. Using the rule between IN and OUT, find the missing number.

IN:	9	8	25	20	11	7	14
OUT:	81	80	?	240	143	98	210

- a. 250 b. 225 c. 275 c. 300
- 3. If sum of both diagonals are same, find the missing value.

