

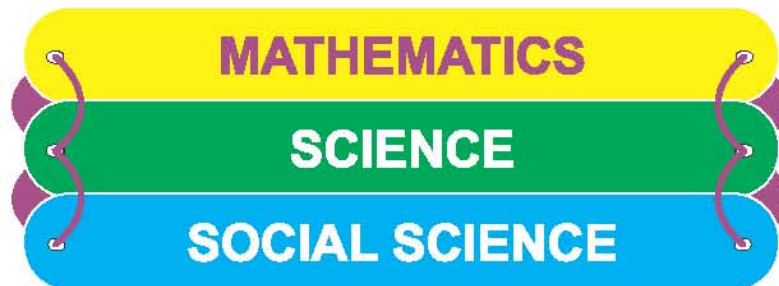


Government of Tamilnadu

STANDARD FOUR

TERM III

VOLUME 2



NOT FOR SALE

Untouchability is Inhuman and a Crime

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MATHEMATICS

STANDARD FOUR

Term III

CHAIRPERSON

Tmt. P. MALLIKA

Senior Lecturer,
DIET, Vadalur,
Cuddalore District.

REVIEWERS

Dr. S. MALARVIZHI

Lecturer,
DIET, Triplicane,
Chennai.

Dr. R. PARVATHI

Lecturer,
DIET, Krishnagiri,
Krishnagiri District.

AUTHORS

Thiru R. MARIAPPAN

Asst. Ele. Educational Officer (Rtd),
Karamanikuppam, Varakalpattu (P.O)
Cuddalore District.

Tmt. A.V. VIJAYA

Graduate Teacher (Rtd),
Saidapet,
Chennai.

Thiru S. MARIRAJAN

B.T. Assistant,
P.K.N. Hr. Sec. School,
Thirumangalam, Madurai District.

Tmt. DORA RODRIGUEZ

Graduate Teacher,
Alpha Matriculation Hr. Sec. School,
Saidapet, Chennai.

Thiru M.J. MD SHAFIULLAH KHAN

B.T. Assistant,
P.U. Middle School,
Melpadappai, Kanchipuram District.

Tmt. R. DHANALAKSHMI

Post Graduate Assistant,
Alpha Matriculation Hr. Sec. School,
Saidapet, Chennai.

Laser typeset, Layout, Illustrations

Thiru V. JAMES ABRAHAM

Thiru R. RAJA



What these Icons stand for!



Practice



Revision



Puzzle



Project

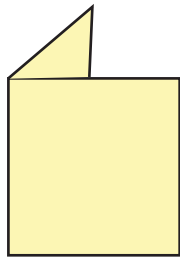


Lab activity

1. SYMMETRY AND REFLECTION

Reflections through Ink plots

- ★ Take a rectangular sheet of paper and fold it into half.



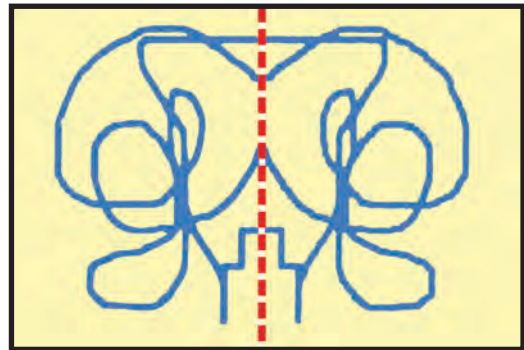
- ★ Choke a thread with ink and place it inside the folded paper and pull the thread out.



- ★ Open the paper. What do you see?
Some designs are formed on either side of folding. Are they same?

Yes, but opposite in face, that is they appear identical but in reverse.

This design is in reflection.



In the same way do some more reflection designs and stick them in your notebook.

Stick the Designs



Fathima, I will do another pattern. Will you help me?



Yes, Kamala, let us have fun.



Take a white sheet and write the alphabet 'B' in bold letter using crayons. Fold and scratch it gently till the impression is formed on the other side. Open it and see.

Ok, Kamala, let me try it with number 5.

Very interesting Kamala, shall we create many pictures like this and stick in our notebook and show to our teacher?

Reflections through Mirror



Saranya : Teacher, is there any special name for these pictures?

Teacher : Yes, these are called **Mirror images**. These pictures are in **mirror reflections**.

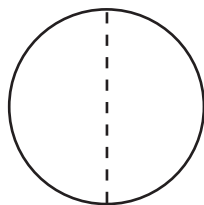
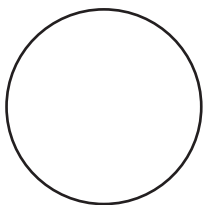
Fathima : Teacher, I see a line between the two sides which divides the pictures equally on either side.

Teacher : Oh, that line is called "**Mirror line symmetry**".

Tick the mirror images.



Line of symmetry



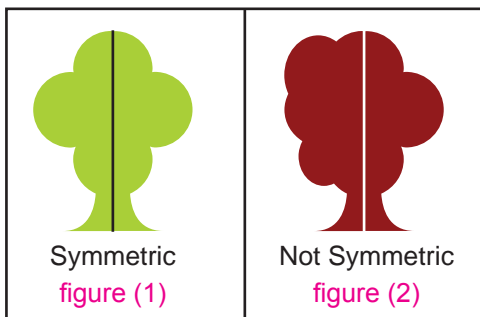
Cut a circular paper, fold it equally. A line divides it into two equal halves. This line is called 'line of symmetry', which means it is exactly the same on both sides of the line.



Practice

Cut a rectangular paper, fold it equally. Draw a line on the folding and stick the paper in your notebook.

Check for symmetry.



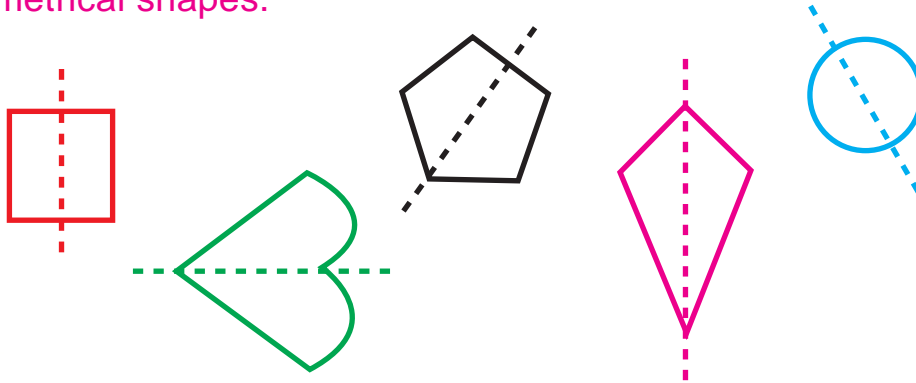
★ Trace two given figures in a small paper separately, fold it and check for the line of symmetry.

★ In figure(1) you get a line of symmetry so that the two parts coincide exactly, figure(1) is symmetrical. In figure(2), two parts do not coincide, so figure (2) is not symmetrical.

Symmetry in geometrical shapes

Observe the following shapes:

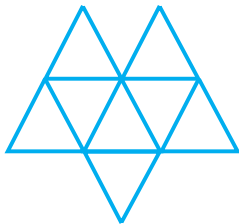
A line of symmetry divides a figure into mirror images. The dotted lines below are the line of symmetry. It divides the figure into two equal parts. Both the sides are symmetrical. These are called **symmetrical shapes**.



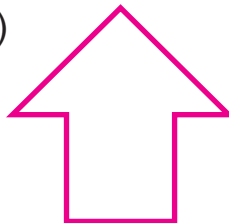
Practice

Draw the line of symmetry for the following figures.

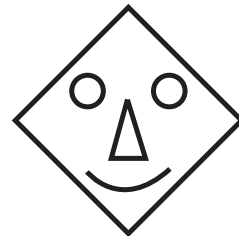
1)



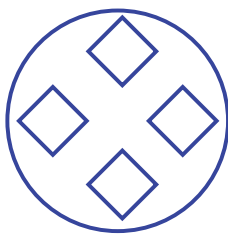
2)



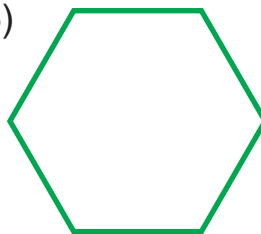
3)



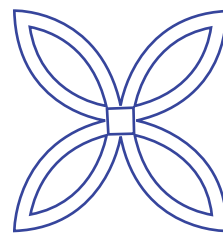
4)



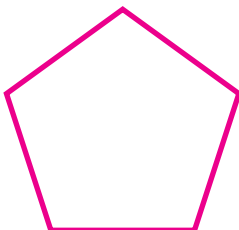
5)



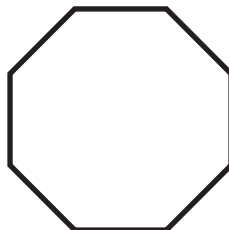
6)



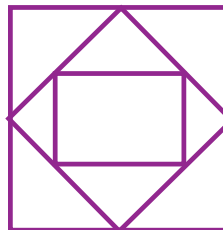
7)



8)



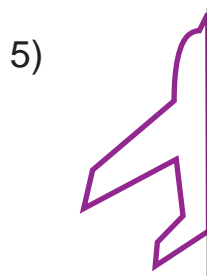
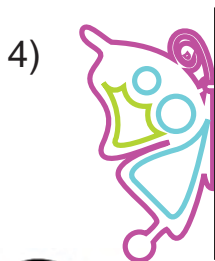
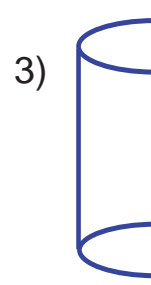
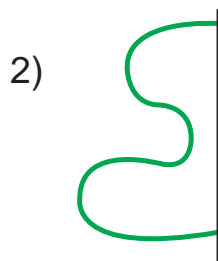
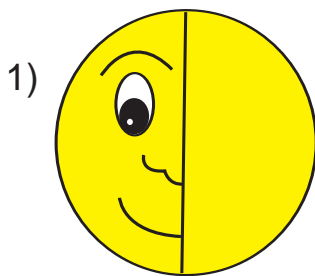
9)



Draw the line of symmetry and circle the letters which do not have the line of symmetry.

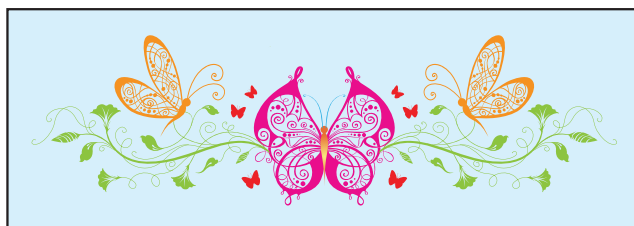
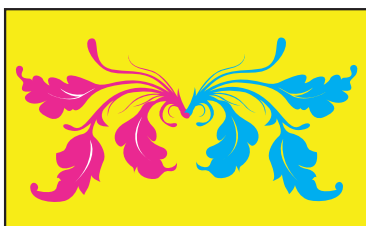
- 1) A B F G H 2) K M N O P
- 3) S U V Z L 4) J Y R C D

Draw other half to make the given pictures symmetrical.



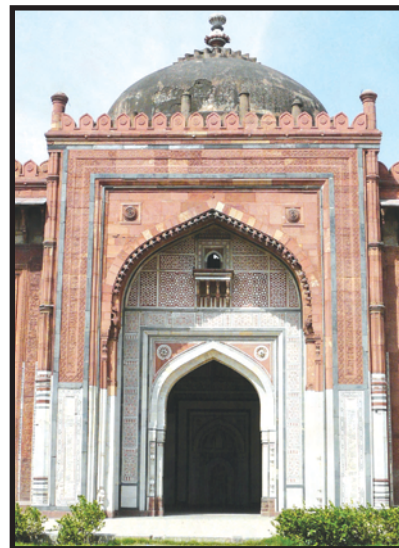
Project

- ★ Nowadays, children like to decorate their hands with tattoos.
- ★ Many of the designs of tattoos are symmetrical.
- ★ Some designs are given below.
- ★ Stick some designs of your choice in your notebook.



Visualize the symmetrical figures

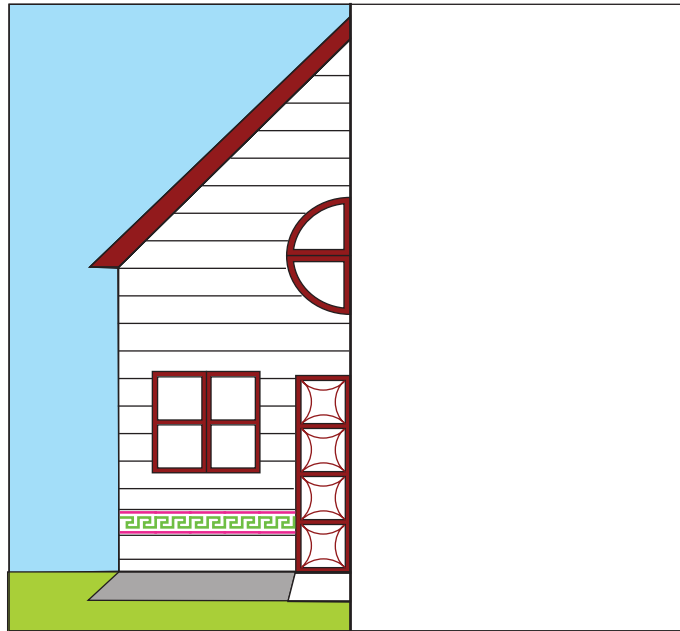
Observe the pictures. They are very beautiful. Symmetry is maintained on the left and right side of the buildings.





Practice

1) Complete the other side of the house and colour it.



2) Complete the other side of the clown and colour it.



Revision



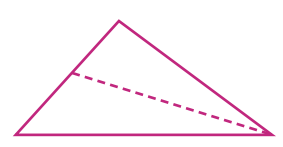
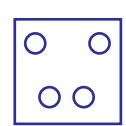
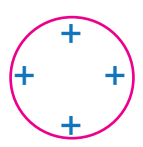
1) A line that divides the picture equally on either side is called _____

2) Draw the line of symmetry. Tick the symmetrical alphabets and pictures given below.

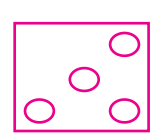
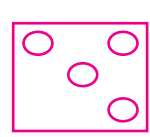
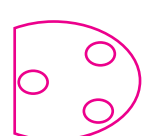
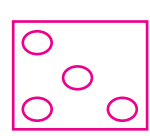
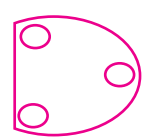
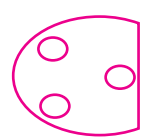
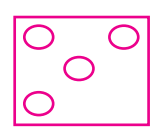
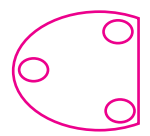
K

M

N

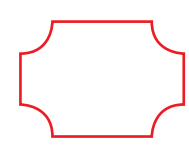
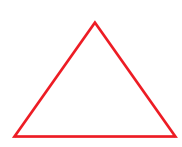
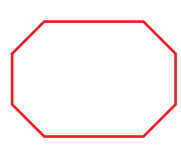


3) Match the mirror images.



4) Draw the lines of symmetry.

X M W



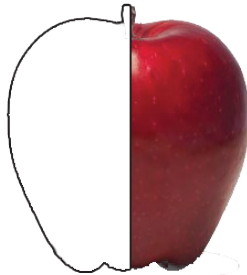
2. SHARING WHOLE

Fraction of a whole

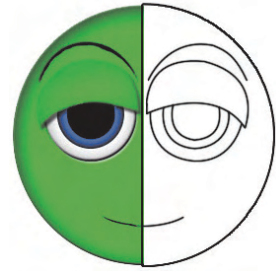
Colour the remaining half in the following figures.



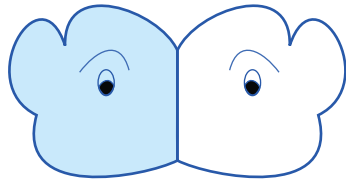
(1)



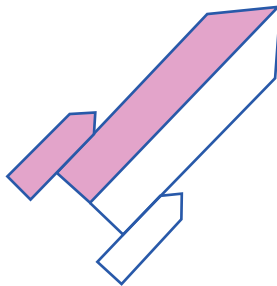
(2)



(3)



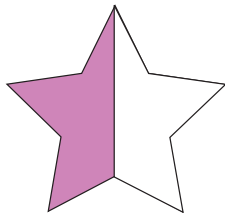
(4)



(5)



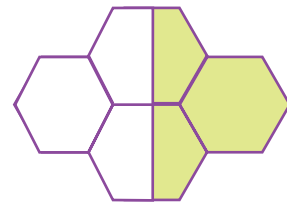
(6)



(7)



(8)



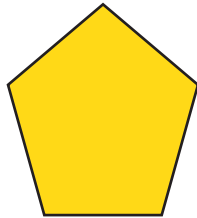
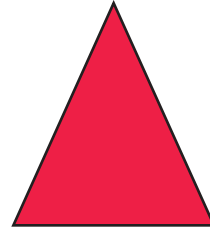
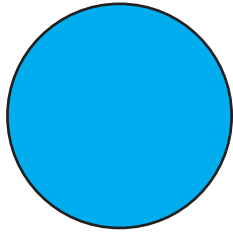
(9)

Each figure is divided into two equal parts.

Each part is called half. We write it as $\frac{1}{2}$

Representation of fractions for the coloured part

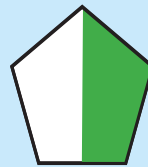
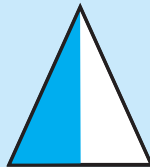
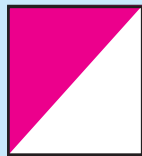
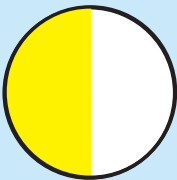
1 means the **whole**. Here the whole part is coloured.



Dividing the whole

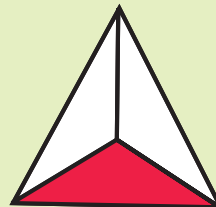
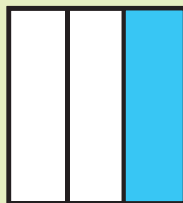
Whole is divided into 2 equal parts. One part is coloured.

The coloured part represents $\frac{1}{2}$

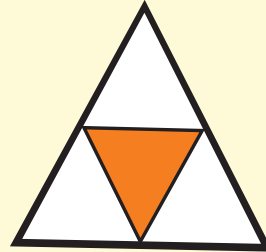
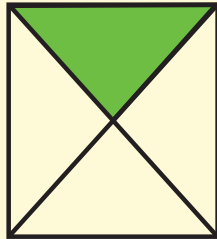
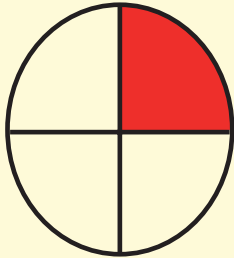


Whole is divided into 3 equal parts. One part is coloured.

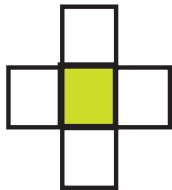
The coloured part represents $\frac{1}{3}$.



Whole is divided into 4 equal parts. One part is coloured.
The coloured part represents $\frac{1}{4}$.



Whole is divided into 5 equal parts. One part is coloured.
The coloured part represents $\frac{1}{5}$.



$\frac{1}{2}, \frac{1}{3}, \frac{1}{4}, \frac{1}{5}$ are called fractional numbers.

Fractions representing the coloured parts

The fraction part coloured in red =

$$\frac{2}{8}$$

The fraction part coloured in green =

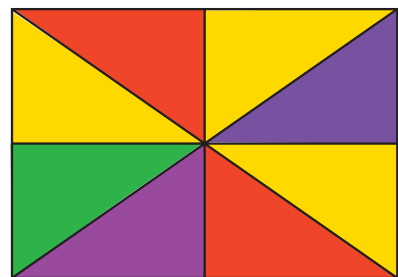
$$\frac{1}{8}$$

The fraction part coloured in yellow =




$$\frac{3}{8}$$

The fraction part coloured in violet =

$$\frac{2}{8}$$




Representation of fractions for the uncoloured part

Picture	Fractional number	In words
	$\frac{1}{2}$	Half
	$\frac{1}{3}$	One-third
	$\frac{1}{4}$	One-fourth
	$\frac{1}{5}$	One-fifth
	$\frac{1}{6}$	One-sixth
	$\frac{1}{7}$	One-seventh
	$\frac{1}{8}$	One-eighth
	$\frac{1}{9}$	One-ninth

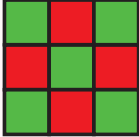
The circle is divided into two, three, four, five, six, seven, eight and nine equal parts. One part is uncoloured. The fraction of the uncoloured parts are $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{1}{6}$, $\frac{1}{7}$, $\frac{1}{8}$ and $\frac{1}{9}$ respectively.



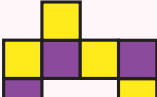
Practice

1)  \sphericalangle The fraction for the coloured parts in red =

\sphericalangle The fraction for the coloured parts in blue =

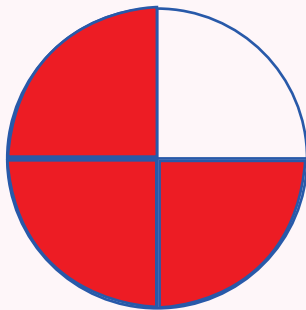
2)  \sphericalangle The fraction for the coloured parts in red =

\sphericalangle The fraction for the coloured parts in green =

3)  \sphericalangle The fraction for the coloured parts in yellow =

\sphericalangle The fraction for the coloured parts in violet =

Numerator and denominator

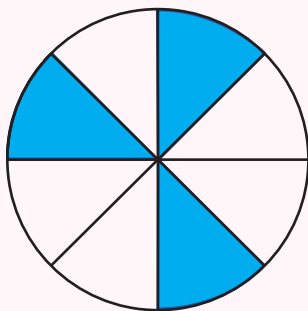


$$\frac{\text{The coloured parts of circle}}{\text{Total equal parts of circle}} = \frac{\text{Numerator}}{\text{Denominator}}$$

$$\frac{3}{4}$$

$$\text{Numerator} = 3$$

$$\text{Denominator} = 4$$



$$\frac{3}{8}$$

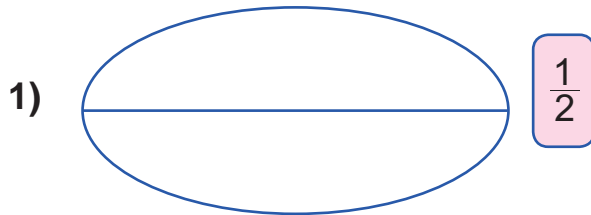
$$\text{Numerator} = 3$$

$$\text{Denominator} = 8$$

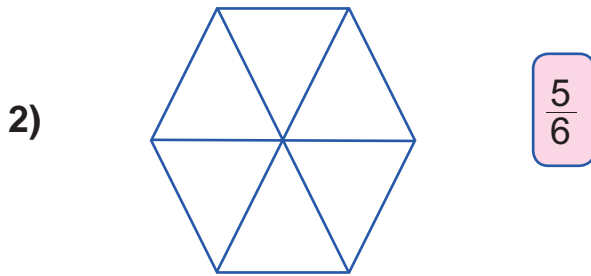


Practice

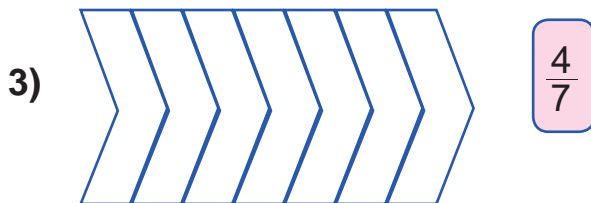
Colour the following shapes as indicated and write the numerator and denominator



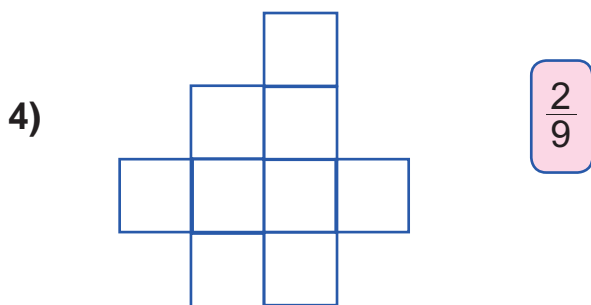
Numerator =
Denominator =



Numerator =
Denominator =

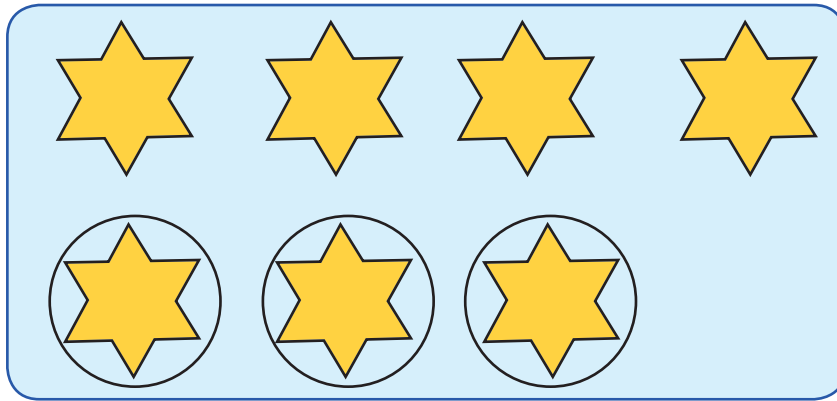


Numerator =
Denominator =



Numerator =
Denominator =

Fraction as a part of collection



There are seven stars.

Three stars are circled.

$$\frac{3}{7}$$

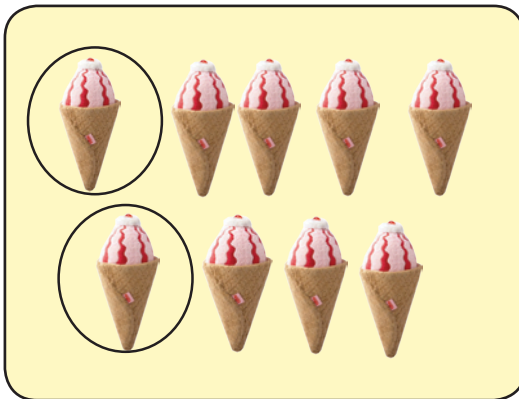
represents the fractional number of stars circled.



Practice

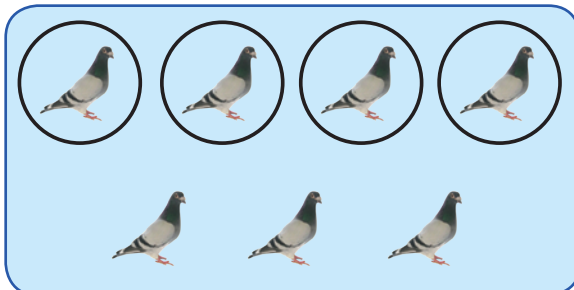
Write the fractions for circled figures.

1)



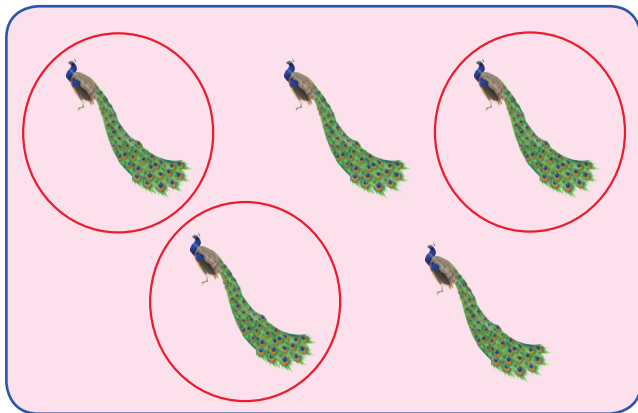
Fractional number of circled
cone ice-creams is $\frac{2}{9}$

2)



represents the fractional
number of circled pigeons.

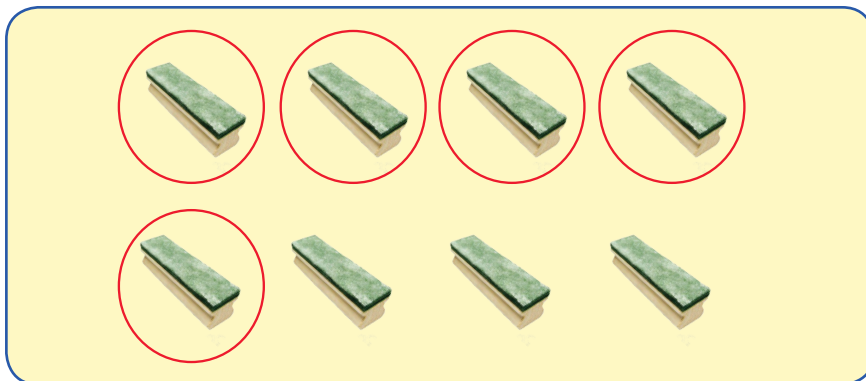
3)



represents the fractional number of circled peacocks.

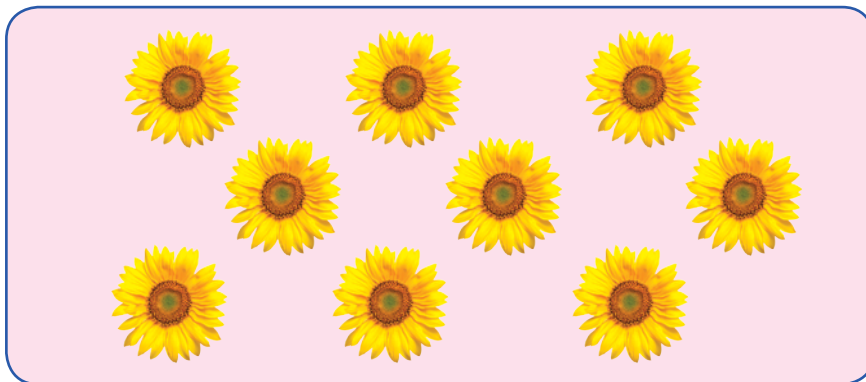
Circle the figures to denote the given fractions.

1)



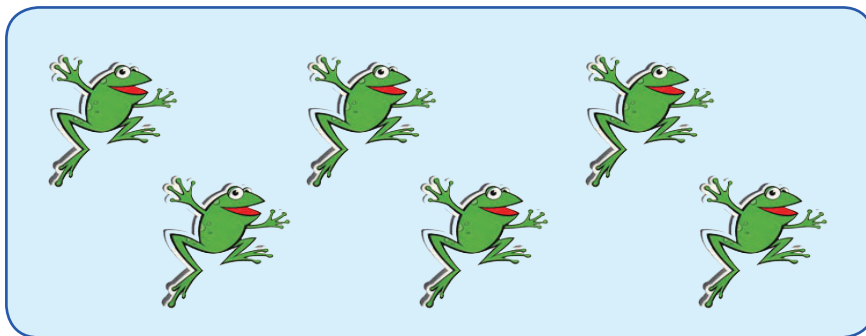
$\frac{5}{8}$

2)



$\frac{4}{9}$

3)



$\frac{1}{6}$

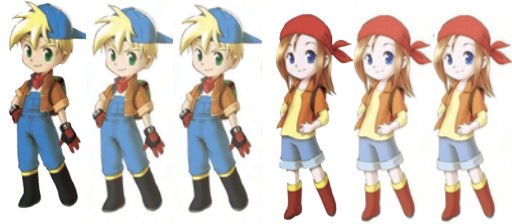
Equivalent fractions

Out of eight equal diamonds, 4 are coloured.



4 is half of 8

Out of six students, 3 are boys.



3 is half of 6

Observe the picture and discuss.

$\frac{1}{2}$		$\frac{1}{2}$	
$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$
$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$
$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$

The same portion of each rectangle is coloured.

Green rectangle refers to $\frac{1}{2}$.

Pink rectangle refers to $\frac{2}{4}$.

Orange rectangle refers to $\frac{3}{6}$.

Violet rectangle refers to $\frac{4}{8}$.

All the coloured rectangles are same in size.

$$\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{4}{8}$$

$\frac{1}{2}$, $\frac{2}{4}$, $\frac{3}{6}$, $\frac{4}{8}$... are equivalent fractions.

Let us frame equivalent fractions.

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

$$\frac{1}{2} = \frac{1 \times 2}{2 \times 2} = \frac{2}{4}$$

$$\frac{1}{2} = \frac{1 \times 3}{2 \times 3} = \frac{3}{6}$$

$$\frac{1}{2} = \frac{1 \times 4}{2 \times 4} = \frac{4}{8}$$

Multiply the numerator and denominator of the fraction by the same number to form equivalent fractions.



Practice

Write down the equivalent fractions.

(1) $\frac{2}{3} = \frac{4}{6} = \frac{6}{9}$

(3) $\frac{2}{5} = \square = \square$

(5) $\frac{1}{7} = \square = \square$

(2) $\frac{1}{4} = \square = \square$

(4) $\frac{1}{3} = \square = \square$

(6) $\frac{3}{8} = \square = \square$



Lab activity

Look at the fractions in the coloured clouds. For each fraction one equivalent fraction is given in the middle. Colour the equivalent fraction with corresponding colour in the cloud and write one more equivalent fraction in the corresponding coloured cloud.

Comparing fractions



$$\frac{1}{6}$$

$$\frac{3}{6}$$

$$\frac{2}{6}$$

To compare the two fractions $\frac{1}{6}$, $\frac{3}{6}$

$\frac{3}{6}$ is greater fraction

$\frac{1}{6}$ is smaller fraction



Practice

Write the fractions for the coloured parts and circle the smaller fractions

<p>1) _____</p>	<p>2) _____</p>
<p>3) _____</p>	<p>4) _____</p>

Circle the greater fraction

5) $\frac{2}{7}$, $\frac{3}{7}$

6) $\frac{5}{8}$, $\frac{4}{8}$

7) $\frac{4}{9}$, $\frac{7}{9}$

Circle the smaller fraction

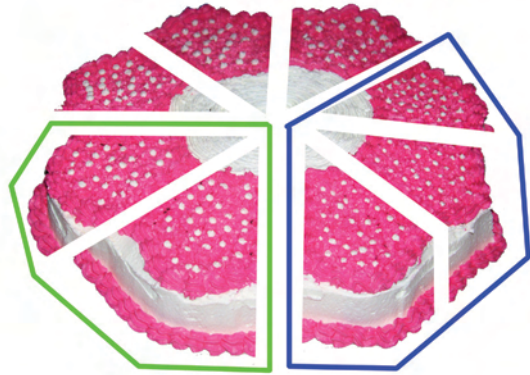
8) $\frac{2}{6}$, $\frac{5}{6}$

9) $\frac{6}{9}$, $\frac{3}{9}$

10) $\frac{2}{5}$, $\frac{4}{5}$

Addition in fractions

Birthday party



Akash celebrated his birthday by giving cakes to his friends. Out of 8 equal pieces of cake, he gave 3 pieces to Anandhi and 2 pieces to Ram.

$$\text{Anandhi's parts} = \text{Three eighths} = \frac{3}{8}$$

$$\text{Ram's parts} = \text{Two eighths} = \frac{2}{8}$$

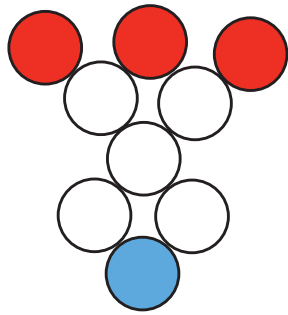
$$\begin{aligned} \text{Total parts given to his friends} &= \frac{3}{8} + \frac{2}{8} \\ &= \frac{3+2}{8} \end{aligned}$$

$$\text{Total parts given to his friends} = \frac{5}{8}$$

$$\frac{3}{8} + \frac{2}{8} = \frac{5}{8}$$

For adding two fractions with the same denominators, add the numerators and keep the same denominator.

Add the fractions



$$\frac{3}{9} + \frac{1}{9} = \frac{3+1}{9} = \frac{4}{9}$$



Practice

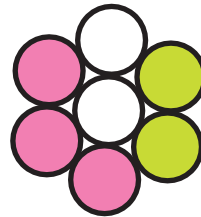
Write the fraction for the coloured and add.

1)



$$\frac{2}{4} + \frac{1}{4} = \frac{3}{4}$$

2)



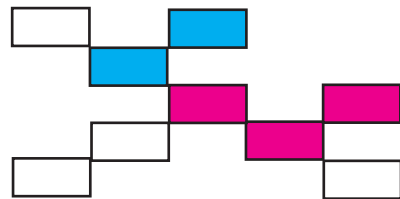
$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

3)



$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

4)



$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

Add the fractions.

1) $\frac{3}{5} + \frac{1}{5}$

2) $\frac{2}{9} + \frac{5}{9}$

3) $\frac{2}{5} + \frac{2}{5}$

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

5) $\frac{4}{9} + \frac{3}{9}$

6) $\frac{3}{6} + \frac{2}{6}$

7) $\frac{3}{7} + \frac{1}{7}$

8) $\frac{2}{8} + \frac{4}{8}$

Subtraction in fractions

Pizza Corner



Sri Ram took $\frac{4}{6}$ parts of pizza. He gave $\frac{3}{6}$ parts to his sister Meenu. How many parts of pizza were left with him?

$$\text{Parts of pizza taken by Sri Ram} = \frac{4}{6}$$

$$\text{Parts of pizza given to Meenu} = \frac{3}{6}$$

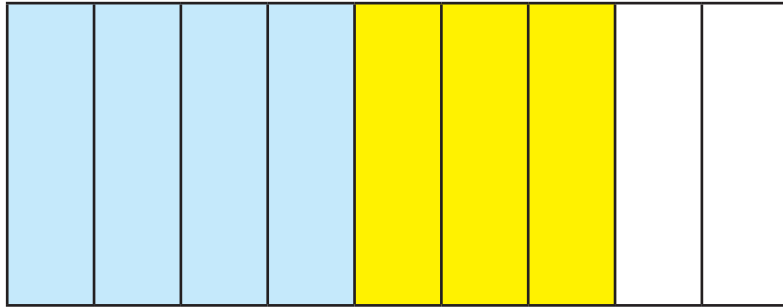
$$\begin{aligned} \text{Parts of pizza left with him} &= \frac{4}{6} - \frac{3}{6} \\ &= \frac{4-3}{6} \end{aligned}$$

$$\begin{aligned} &= \frac{1}{6} \\ \text{Fractional number of pizza left with him} &= \frac{1}{6} \end{aligned}$$

$$\frac{4}{6} - \frac{3}{6} = \frac{1}{6}$$

While subtracting fractions with the same denominators, subtract the numerators and keep the same denominator.

Subtract the fractions : $\frac{7}{9} - \frac{4}{9}$



Seven parts are coloured.

The fraction for the coloured part = $\frac{7}{9}$

The fraction for the coloured part in blue = $\frac{4}{9}$

The fraction for the coloured part in yellow = $\frac{7}{9} - \frac{4}{9}$
= $\frac{7-4}{9}$

The fraction for the coloured part in yellow = $\frac{3}{9}$

$$\frac{7}{9} - \frac{4}{9} = \frac{3}{9}$$



Practice

Subtract the fractions

1) $\frac{5}{6} - \frac{2}{6}$

2) $\frac{5}{9} - \frac{3}{9}$

3) $\frac{3}{4} - \frac{1}{4}$

4) $\frac{5}{8} - \frac{3}{8}$

5) $\frac{6}{9} - \frac{1}{9}$

6) $\frac{7}{8} - \frac{3}{8}$

7) $\frac{3}{5} - \frac{1}{5}$

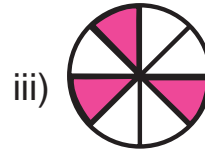
8) $\frac{3}{7} - \frac{2}{7}$

Revision



Answer the following questions.

1) Write down the fractions for the coloured part.



2) Write two equivalent fractions for the following.

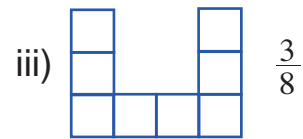
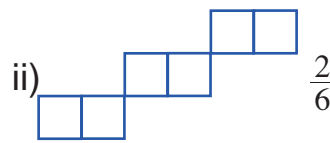
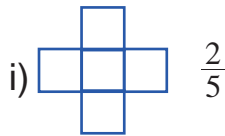
i) $\frac{2}{4}$

ii) $\frac{3}{5}$

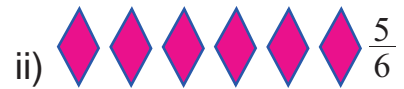
iii) $\frac{1}{7}$

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

3) Colour the figures for the given fractions.



4) Circle the figures to the given fractions.



5) Add the fractions.

i) $\frac{2}{4} + \frac{1}{4}$

ii) $\frac{1}{5} + \frac{3}{5}$

iii) $\frac{3}{9} + \frac{2}{9}$

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

v) $\frac{4}{7} + \frac{1}{7}$

vi) $\frac{2}{6} + \frac{3}{6}$

vii) $\frac{3}{8} + \frac{1}{8}$

viii) $\frac{6}{9} + \frac{2}{9}$

6) Subtract the fractions.

i) $\frac{3}{4} - \frac{1}{4}$

ii) $\frac{3}{6} - \frac{2}{6}$

iii) $\frac{4}{9} - \frac{2}{9}$

iv) $\frac{4}{5} - \frac{3}{5}$

v) $\frac{5}{7} - \frac{3}{7}$

vi) $\frac{2}{3} - \frac{1}{3}$

vii) $\frac{7}{9} - \frac{3}{9}$

viii) $\frac{4}{7} - \frac{1}{7}$

3. PERIMETER AND AREA



Suresh is a farmer. He wants to fence his field. He is measuring the sides of the field with the help of his son.

Boundary of the field
 $= 45\text{m} + 15\text{m} + 30\text{m} + 25\text{m}$
 $= 115\text{ metre}$

To fence the field I need 115m of wire for each row.

Sum of all the sides of the field is called its perimeter. The length of the boundary of a closed figure is called its perimeter.

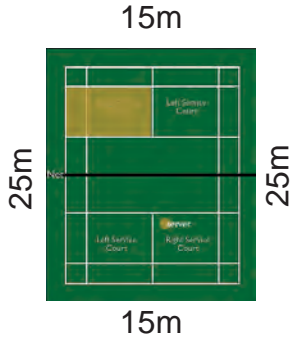


Perimeter = Sum of all the sides of the shape.

Practice

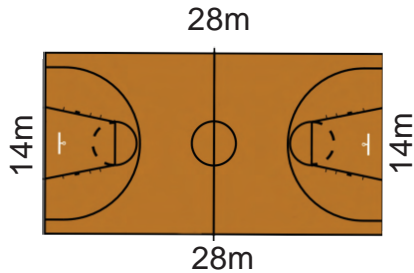
Find the perimeter for the following.

1)



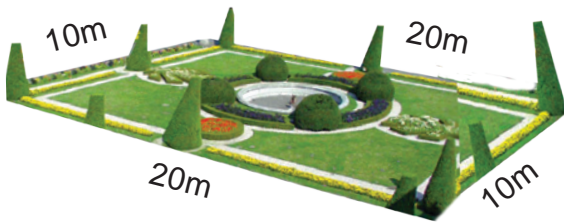
Perimeter of badminton court
 = 15m + 25m + 15m + 25m
 = ____ m

2)



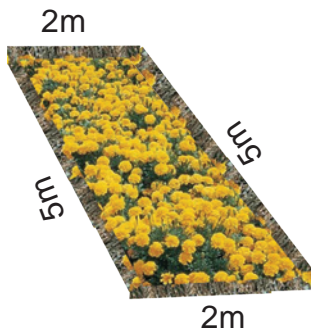
Perimeter of basketball court
 = _____
 = ____ m

3)



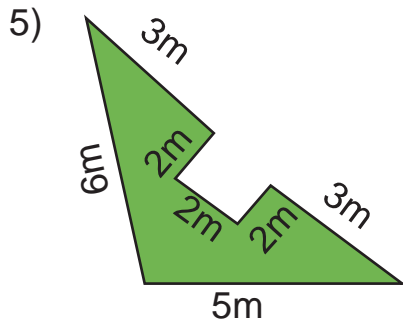
Jothi goes for a walk around the park every morning. What is the total distance that she covers by walk?
 Distance covered by walk = perimeter of the park
 = _____
 = ____ m

4)

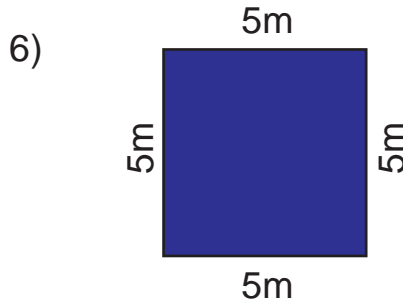


Anu's mother Devi planted marigolds in her garden. Now she wants to fence her garden. Find the length of fence.
 Length of the fence = perimeter
 = _____
 = ____ m

Perimeter

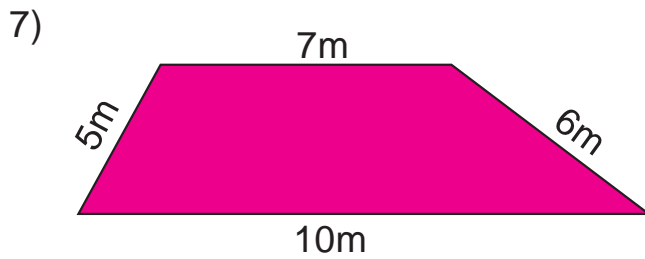


$$\begin{aligned} &= 5m + 6m + 3m + 2m + 2m + 2m + 3m \\ &= 23m \end{aligned}$$



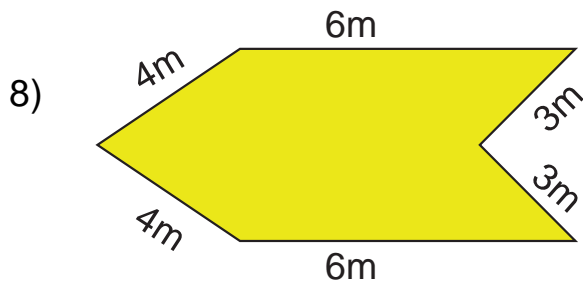
Perimeter

$$\begin{aligned} &= \underline{\hspace{10em}} \\ &= \underline{\hspace{10em}} \end{aligned}$$



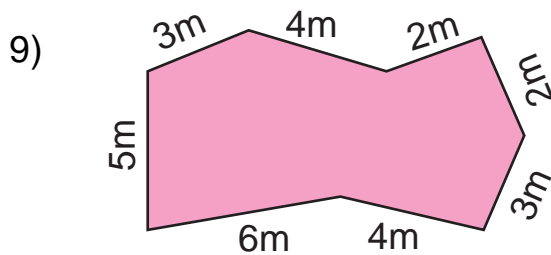
Perimeter

$$\begin{aligned} &= \underline{\hspace{10em}} \\ &= \underline{\hspace{10em}} \end{aligned}$$



Perimeter

$$\begin{aligned} &= \underline{\hspace{10em}} \\ &= \underline{\hspace{10em}} \end{aligned}$$

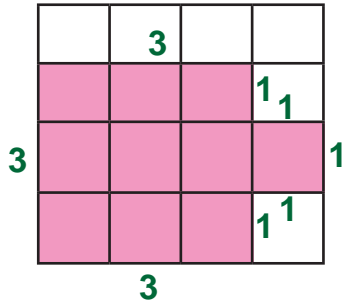



Perimeter

$$\begin{aligned} &= \underline{\hspace{10em}} \\ &= \underline{\hspace{10em}} \end{aligned}$$

Perimeter on a square paper

We can easily find the perimeter of a shape drawn on square paper.



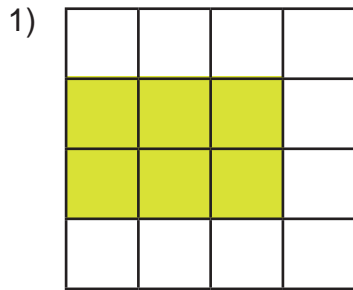
The side of each square is 1cm.  1cm

Perimeter of the shape on the square paper = 14cm.

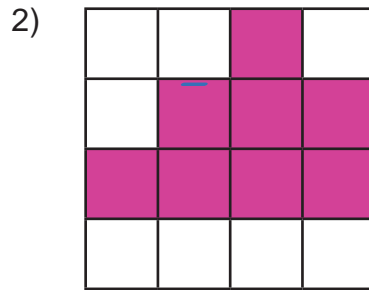


Practice

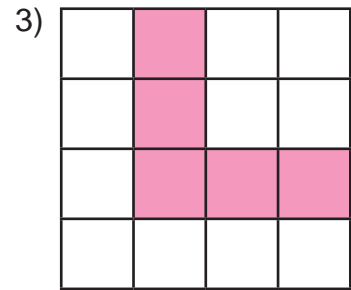
Find out perimeter of the shapes given below.



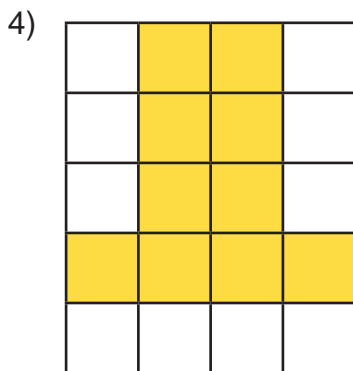
Perimeter = _____



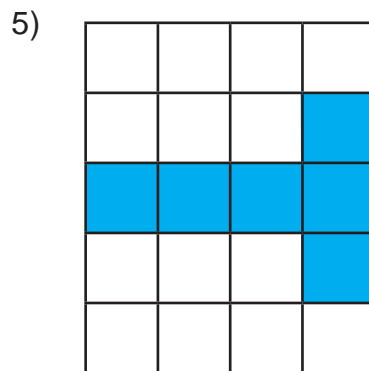
Perimeter = _____



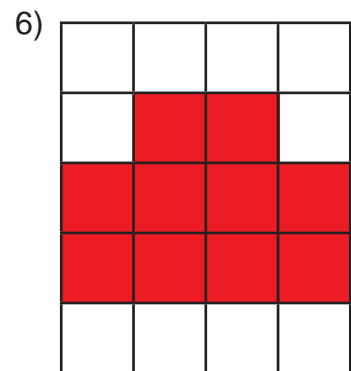
Perimeter = _____



Perimeter = _____



Perimeter = _____



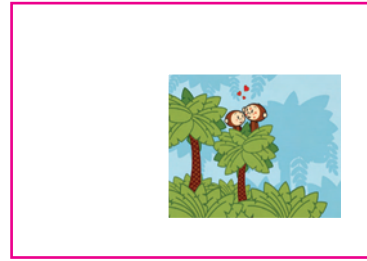
Perimeter = _____

Area

Look at the picture drawn in the post card.

The picture occupies some space on the card.

This space is area of the picture.



The space occupied by a shape is called its area

Lab activity



* Collect stamps.

* Stick them as shown.

Observe the area of each stamp.

* Place your pencil box on your notebook.

* Trace and colour.

The coloured space is the area of base of the box.



* Collect a few greeting cards of different sizes. Find out the areas by tracing

Comparing area



picture (1)



picture (2)

Two pictures are given. The areas of the pictures are not equal. Area of the picture (1) is greater than the area of the picture (2)



Practice

Tick the figure which has the greater area.

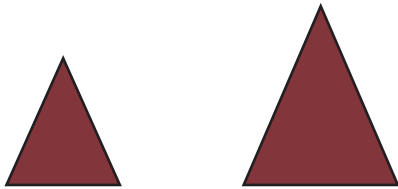
1)



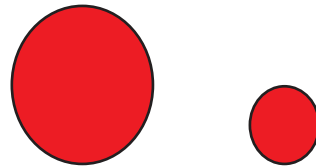
2)



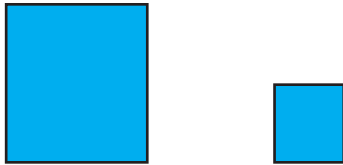
3)



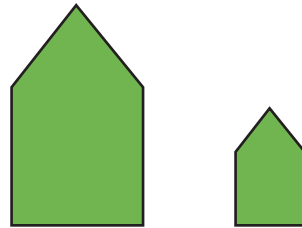
4)



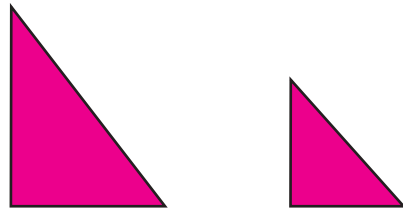
5)



6)



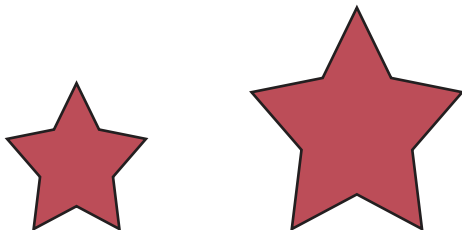
7)



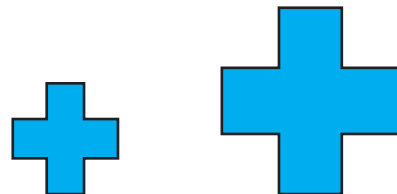
8)



9)



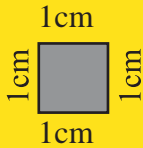
10)



Area on the square paper

The unit for measuring area is square unit.

Square unit can be written as sq. unit.



Area of this unit square is 1 sq.cm.



There are four unit squares in this square.

1 unit square = 1 sq.cm.

Area of this square = 4 sq.cm.



Practice

Find out the areas of the following shapes.

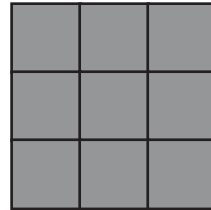
 = 1 sq.cm.

1)



Area = 6 sq.cm.

2)



Area = _____

3)



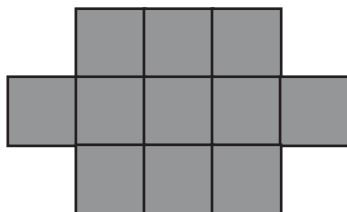
Area = _____

4)



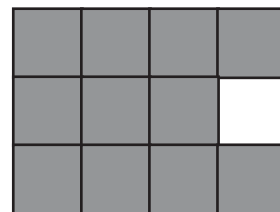
Area = _____

5)



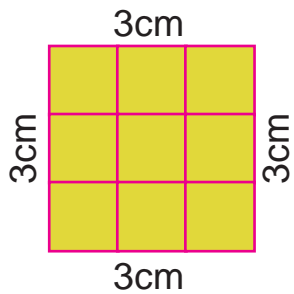
Area = _____

6)



Area = _____

Comparing perimeter and area



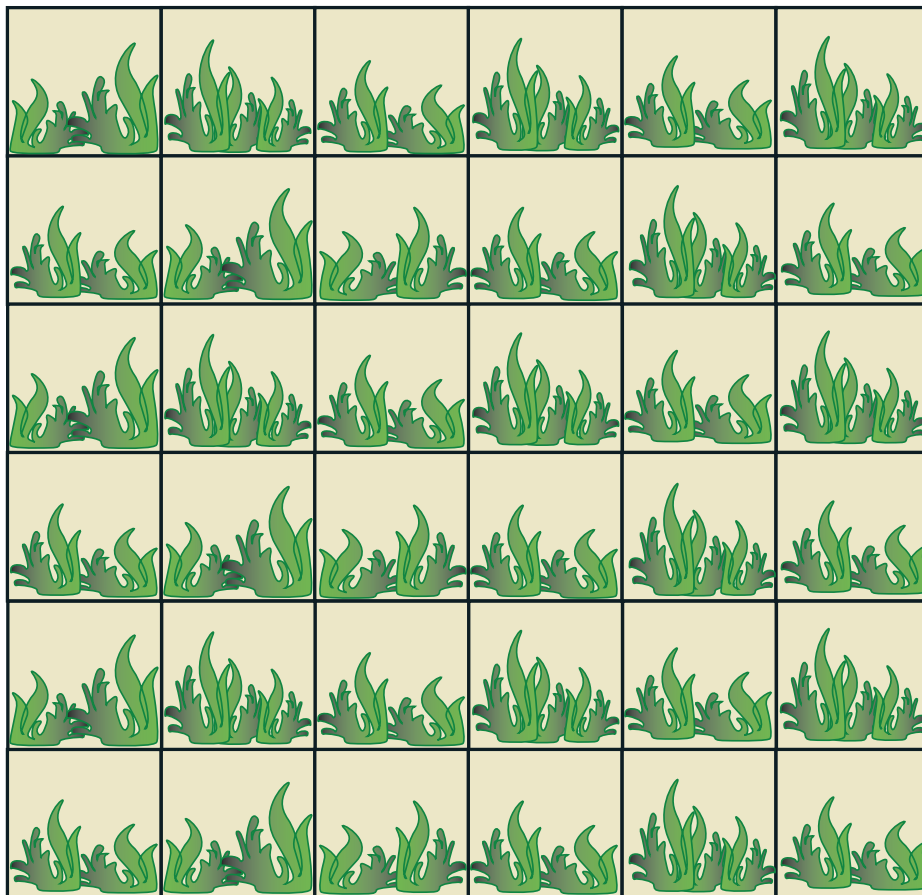
Perimeter of this square = 12 cm

Area of the square = 9 sq.cm.

1 sq.cm.	1 sq.cm.	1 sq.cm.
1 sq.cm.	1 sq.cm.	1 sq.cm.
1 sq.cm.	1 sq.cm.	1 sq.cm.

Puzzle

- Look at the field given below.
- Divide the field into 4 equal areas
- The four divided areas should be in different shapes.



Revision

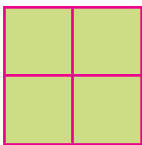


Fill in the blanks.

- 1) Area of 1 unit square is _____
- 2) The sum of all the sides of shape is _____
- 3) A square unit can be written as _____
- 4) We can easily find out the perimeter and area of a shape drawn on a _____ paper.
- 5) The space occupied by a shape is called _____

Find the areas and perimeter of the following figures. The area of each unit square is 1 sq cm.

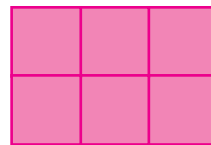
1)



Perimeter = _____

Area = _____

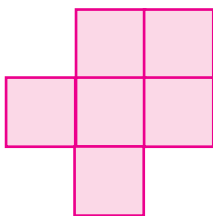
2)



Perimeter = _____

Area = _____

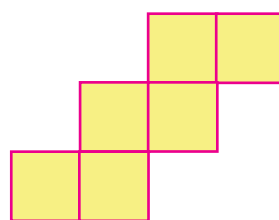
3)



Perimeter = _____

Area = _____

4)



Perimeter = _____

Area = _____

4. HANDLING MONEY

Two friends are talking about the change of rupees.



Do you have change for 1000 rupees ?



Shall I give two 500 rupee notes?



No, I want in 100 rupee notes?



I am not having ten 100 rupee notes. Only I have five 100 rupee notes.

O.K. you give one 500 rupee note and five 100 rupee notes.



Rupees can be expressed as ₹
and paise can be expressed as p.

₹5.50 can be written in words as **Rupees five and fifty paise** or **Five rupees and fifty paise**.

5 Rupees ← ₹ 5.50 → 50 paise



Play with coins



Can you make ₹1 using 50 p coins ?

Look here !

★ ₹ 1 using 50 p coins



★ ₹ 2 using ₹ 1 coins



Now try !

- ★ Make ₹ 5 using 1 rupee coins.
- ★ Make ₹ 10 using 2 rupee coins.
- ★ Make ₹ 50 using 5 rupee coins.

Know it.

$$50 \text{ p} + 50 \text{ p} = 100 \text{ p}$$

$$100 \text{ p} = ₹ 1$$

Denominations

Write down the denominations for the amount given.

$$₹ 595 = \boxed{₹ 500} \quad \boxed{₹ 50} \quad \boxed{₹ 20} \quad \boxed{₹ 20} \quad \boxed{₹ 5}$$



$$₹ 500 \times 1 = ₹ 500$$

$$₹ 50 \times 1 = ₹ 50$$

$$₹ 20 \times 2 = ₹ 40$$

$$₹ 5 \times 1 = ₹ 5$$

$$\text{Total} = \underline{\underline{₹ 595}}$$



$$₹ 325 = \boxed{₹ 100} \quad \boxed{₹ 100} \quad \boxed{₹ 100} \quad \boxed{₹ 20} \quad \boxed{₹ 5}$$



$$₹ 100 \times \underline{\quad} = \underline{\quad}$$

$$₹ 20 \times \underline{\quad} = \underline{\quad}$$

$$₹ 5 \times \underline{\quad} = \underline{\quad}$$

$$\text{Total} = \underline{\quad}$$



$$₹ 660 = \boxed{\quad} \quad \boxed{\quad} \quad \boxed{\quad} \quad \boxed{\quad}$$



Convert ₹ 23 into paise.

$$₹ 1 = 100 \text{ p}$$

$$₹ 23 = 23 \times 100 \text{ p}$$

$$₹ 23 = 2300 \text{ p}$$

To change ₹ into p
multiply by 100

Convert ₹ 35.75 into paise.

$$₹ 35.75$$

Step 1

$$\begin{aligned} ₹ 35 &= 35 \times 100 \text{ p} \\ &= 3500 \text{ p} \end{aligned}$$

Step 2

$$\begin{array}{r} 3500 \text{ p} \\ + 75 \text{ p} \\ \hline = 3575 \text{ p} \end{array}$$

$$₹ 35.75 = 3575 \text{ p}$$

Convert 600 p into ₹

$$100 \text{ p} = ₹ 1$$

$$600 \div 100 = 6$$

$$600 \text{ p} = ₹ 6$$

Express 750 p into ₹

$$750 \text{ p} = 700 \text{ p} + 50 \text{ p}$$

$$= ₹ 7 + 50 \text{ p}$$

$$750 \text{ p} = ₹ 7.50$$



Practice

Convert the following.

1) ₹ 2 = _____ p.

2) ₹ 5 = _____ p.

3) ₹ 10 = _____ p.

4) ₹ 50 = _____ p.

5) ₹ 65 = _____ p.

6) ₹ 100 = _____ p.

7) 300 p = ₹ 3

8) 700 p = ₹ _____

9) 500 p = ₹ _____

10) 1670 p = ₹ 16 .70

11) 950 p = ₹ _____

12) 2540 p = ₹ _____

Addition without Conversion

$$₹ 24 . 50$$

$$+ ₹ 55 . 20$$

$$₹ 79 . 70$$

Step 1:

Add paise

$$50p + 20p = 70p$$

Step 2:

Add rupees

$$₹ 24 + ₹ 55 = ₹ 79$$

$$₹ 24 . 25$$

$$₹ 42 . 40$$

$$+ ₹ 63 . 10$$

$$₹ 129 . 75$$

Step 1:

Add paise

$$25p + 40p + 10p = 75p$$

Step 2:

Add rupees

$$₹ 24 + ₹ 42 + ₹ 63 = ₹ 129$$



Practice

1)

$$₹ 40 . 75$$

$$+ ₹ 25 . 20$$

2)

$$₹ 20 . 50$$

$$+ ₹ 18 . 15$$

3)

$$₹ 12 . 10$$

$$+ ₹ 68 . 30$$

4)

$$₹ 48 . 30$$

$$₹ 67 . 25$$

$$+ ₹ 32 . 15$$

5)

$$₹ 51 . 15$$

$$₹ 34 . 25$$

$$+ ₹ 48 . 30$$

6)

$$₹ 95 . 30$$

$$₹ 58 . 20$$

$$+ ₹ 71 . 25$$

Addition with Conversion

$$\begin{array}{r} ₹ 80 . 85 \\ + ₹ 65 . 75 \\ \hline ₹ 146 . 60 \end{array}$$

Step 1:

Add the paise

$$85p + 75p = 160p = ₹ 1.60$$

Step 2:

Add the rupees

$$₹ 1 + ₹ 80 + ₹ 65 = ₹ 146$$

$$\begin{array}{r} ₹ 54 . 25 \\ ₹ 42 . 45 \\ + ₹ 63 . 70 \\ \hline ₹ 160 . 40 \end{array}$$

Step 1:

Add the paise

$$25p + 45p + 70p = 140p = ₹ 1.40$$

Step 2:

Add the rupees

$$₹ 1 + ₹ 54 + ₹ 42 + ₹ 63 = ₹ 160$$



Practice

1)

$$\begin{array}{r} ₹ 145 . 65 \\ + ₹ 69 . 50 \\ \hline \end{array}$$

2)

$$\begin{array}{r} ₹ 124 . 50 \\ + ₹ 215 . 75 \\ \hline \end{array}$$

5)

$$\begin{array}{r} ₹ 74 . 35 \\ ₹ 27 . 75 \\ + ₹ 61 . 50 \\ \hline \end{array}$$

3)

$$\begin{array}{r} ₹ 48 . 90 \\ + ₹ 67 . 60 \\ \hline \end{array}$$

4)

$$\begin{array}{r} ₹ 87 . 85 \\ + ₹ 96 . 95 \\ \hline \end{array}$$

Stationery shop



Yokesh bought a pencil box for ₹ 24.50 and a pen for ₹ 15.50. Find the total amount paid.

Cost of a pencil box = ₹ 24 . 50

Cost of a pen = + ₹ 15 . 50

Total cost = ₹ 40 . 00

The amount paid by him = ₹ 40



Practice

- 1) Chandra bought notebooks for ₹ 55.50 and pen for ₹ 73.50. Find out the total amount she paid.
- 2) Ravi bought bread for ₹ 18 and Jam bottle for ₹ 12.50. How much did he spend in all ?
- 3) Vinisha bought chapathi for ₹ 25.50 and a fruit juice for ₹ 15.50. How much should she pay ?

Subtraction with Conversion

$$\begin{array}{r} ₹ 52 . 20 \\ - ₹ 38 . 75 \\ \hline ₹ 13 . 45 \end{array}$$

Step 1:

Subtract paise

75 p cannot be subtracted from 20 p.

So, take ₹ 1 from ₹ 52.

Now ₹ 1 = 100 p

$$100\text{p} + 20\text{p} = 120\text{p}.$$

$$120\text{p} - 75\text{p} = 45\text{p}.$$

Step 2:

Subtract rupees

$$₹ 51 - ₹ 38 = ₹ 13$$



Practice

1)

$$\begin{array}{r} ₹ 75 . 65 \\ - ₹ 28 . 30 \\ \hline \end{array}$$

2)

$$\begin{array}{r} ₹ 92 . 50 \\ - ₹ 48 . 10 \\ \hline \end{array}$$

3)

$$\begin{array}{r} ₹ 42 . 25 \\ - ₹ 24 . 40 \\ \hline \end{array}$$

4)

$$\begin{array}{r} ₹ 34 . 60 \\ - ₹ 15 . 85 \\ \hline \end{array}$$

5)

$$\begin{array}{r} ₹ 64 . 10 \\ - ₹ 36 . 95 \\ \hline \end{array}$$

6)

$$\begin{array}{r} ₹ 83 . 50 \\ - ₹ 33 . 75 \\ \hline \end{array}$$

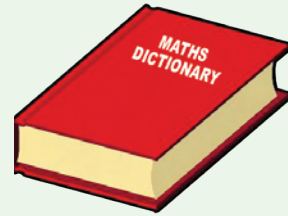
Life-related problems

Arun bought a book for ₹ 24.50 and a pen for ₹ 18.50. How much amount did he spend more to buy a book?

$$\text{Cost of a book} = ₹ 24.50$$

$$\text{Cost of a pen} = - ₹ 18.50$$

$$₹ 6.00$$



Aruna spent ₹ 6 more to buy a book.

Fruit stall



Rani bought fruits for ₹ 45.50. She gave ₹ 100 to the seller. How much did she get back?

$$\text{Amount given to the seller} = ₹ 100.00$$

$$\text{Cost of fruits} = - ₹ 45.50$$

$$\text{Amount she got back} = ₹ 54.50$$



Practice

1. Seetha bought family pack icecream for ₹ 230.50. She gave ₹ 500 to the shop keeper. Find the balance amount.
2. Prakash bought a cake and a cherry packet for ₹ 97.50. The cost of a cake is ₹ 49 . 50. Find the cost of a cherry packet.

Multiple cost

Ramesh bought 3 kg of laddus at the rate of ₹ 150 per kg. Find the amount paid by him.

$$\text{Cost of 1 kg of laddus} = ₹ 150$$

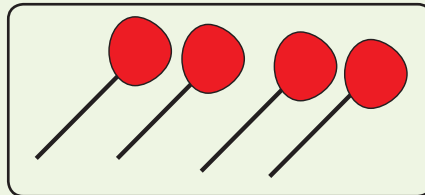
$$\text{Cost of 3 kg of laddus} = ₹ 150 \times 3$$

$$\text{Cost of 3 kg of laddus} = \underline{₹ 450}$$

$$\text{Amount paid by Ramesh} = ₹ 450$$



Cost of a lollipop is ₹ 2.50. Find the cost of 4 lollipops.



$$\text{Cost of 1 lollipop} = ₹ 2 . 50$$

$$\text{Cost of 4 lollipops} = ₹ 2 . 50$$

$$\begin{array}{r} \times \quad 4 \\ \hline 10 . 00 \\ \hline \end{array}$$

$$\text{Cost of 4 lollipops} = ₹ 10$$

Step 1:

Multiply paise

$$50p \times 4 = 200p = ₹ 2$$

Step 2:

Multiply rupees

$$₹ 2 \times 4 = ₹ 8 \text{ and}$$

$$\text{adding with } ₹ 2 = ₹ 10$$

Unit cost

Five friends went to a theme park. They paid ₹ 850 towards the entry fee. Find the amount paid by each.

Total amount given by them = ₹ 850

Number of persons = 5

Amount paid by each person = ₹ $850 \div 5$
= ₹ 170

$$\begin{array}{r}
 170 \\
 5 \overline{) 850} \\
 \underline{5} \\
 35 \\
 \underline{35} \\
 0
 \end{array}$$



Practice

- 1) Rajan bought 3 litres of coconut oil at ₹ 150 per litre. Find the total cost paid by Rajan.
- 2) Priya bought 8 bananas for ₹ 32. Find the cost of one banana.
- 3) If 6 apples cost ₹ 108, how much will one apple cost ?
- 4) Vijaya bought 35 eggs at ₹ 3 per egg. Find the total cost.



Estimate to the nearest rupees

Amount	Estimated cost	Reason
₹ 15.20	₹ 15	20 paise is less than 50 paise
₹ 18.80	₹ 19	80 paise is more than 50 paise



Estimate

- * Vivek bought a soap cake for ₹ 22.40, a tooth brush for ₹ 18.70 and tooth paste for ₹ 35.50. He prepared the estimation to close the nearest one rupee.

Items Purchased	Actual cost	Estimated cost	Difference in paise
Soap cake	₹ 22.40	₹ 22	40 p
Tooth brush	₹ 18.70	₹ 19	30 p
Tooth paste	₹ 35.50	₹ 36	50 p
Total	₹ 76.60	₹ 77	-

- * Leena wants to make rava sweets. She wants to estimate the expenditure to the nearest ten rupees. She draws the following estimation table.

Items required	Quantity	Actual cost ₹	Estimated cost ₹	Difference in ₹
Rava	1 kg	₹ 33	₹ 30	₹ 3
Sugar	1 kg	₹ 47	₹ 50	₹ 3
Cashewnuts	250 g	₹ 54	₹ 50	₹ 4
Ghee	100 g	₹ 28	₹ 30	₹ 2
Total		₹ 162	₹ 160	-



Practice

- 1) Lalitha bought perfume for ₹31.35, hair clips for ₹23.40 and talcum powder for ₹48.60. Estimate the total and find the difference, close to the nearest one rupee.
- 2) Siva bought balloons for ₹ 27, colour paper for ₹ 41 and wall picture for ₹ 63. Find the estimated cost and difference in estimation, close to the nearest ten rupee.



Lab activity

- * Materials and their cost are given.
- * you have ₹ 500.
- * List different ways you have to select the materials within ₹ 500.



₹ 15



₹ 120



₹ 25



₹ 175



₹ 70



₹ 150



₹ 100



₹ 75



₹ 30



₹ 60



₹ 275



₹ 50

Revision



1) Express rupees into paise.

i) ₹ 3 = _____ p. ii) ₹ 12 = _____ p.

iii) ₹ 75 = _____ p. iv) ₹ 60 = _____ p.

2) Express paise into rupees.

i) 700 p = ₹ _____ ii) 1900 p = ₹ _____

iii) 800 p = ₹ _____ iv) 2600 p = ₹ _____

3) i) ₹ 35 . 75 ii) ₹ 73 . 25 iii) ₹ 13 . 50

+ ₹ 40 . 50 + ₹ 81 . 50 + ₹ 45 . 75

4) i) ₹ 75 . 50 ii) ₹ 47 . 25 iii) ₹ 77 . 50

- ₹ 13 . 25 - ₹ 17 . 50 - ₹ 52 . 75

5) Estimate to the nearest rupees.

₹ 17.25 is estimated as ₹ _____

₹ 79.79 is estimated as ₹ _____

6) Write the denominations for ₹ 975.

7) Raju bought apples and mangoes for ₹ 96.50. Cost of the apples is ₹ 53.50. Find out the cost of the mangoes.

8) Cost of a pencil is ₹ 4. Find out the cost of 56 pencils.

9) Cost of a kerchief is ₹ 5.50. What is the cost of 8 kerchieves ?

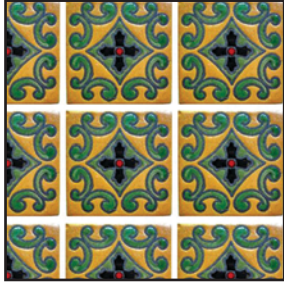
10) Cost of four pens is ₹ 128. Find out the cost of a pen.

11) If 4 toys cost ₹ 560, how much will be the cost of a toy ?

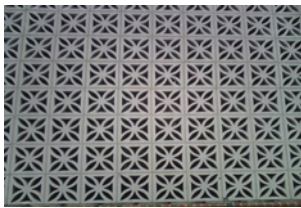
5. PATTERNS

Observe the patterns in geometry

Ceramic tiles

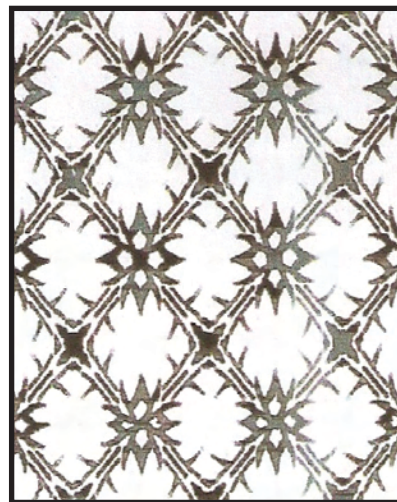


Cement blocks

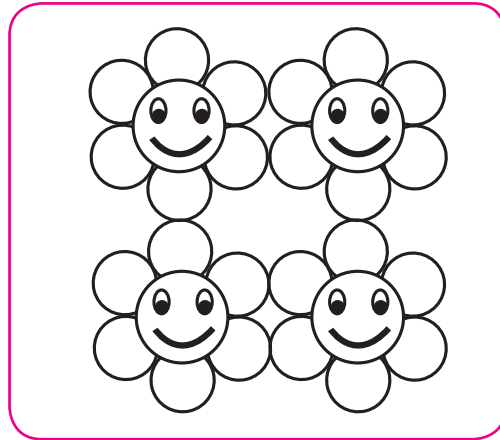
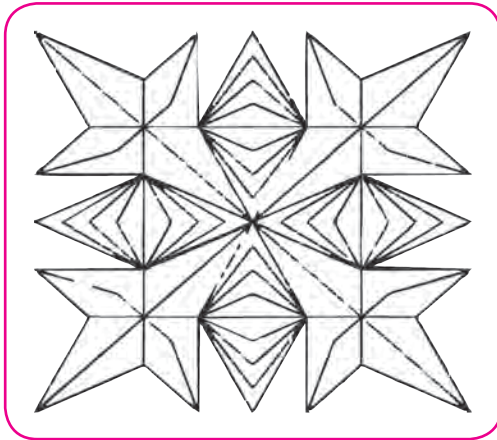


Patterns are found in nature, in science, in buildings and in mathematics. Patterns in nature are leaves and rocks. Patterns in buildings are shown in the above ceramic tiles and cement blocks.

Colour the given geometry patterns.



By joining the 4 tiles one geometry pattern is formed. Colour it.



Complete the geometry pattern.

1)

--	--	--	--	--	--	--	--

2)

--	--	--	--	--	--	--	--

3)

--	--	--	--	--	--	--	--

4)

--	--	--	--	--	--	--	--

5)

--	--	--	--	--	--	--	--	--	--	--	--

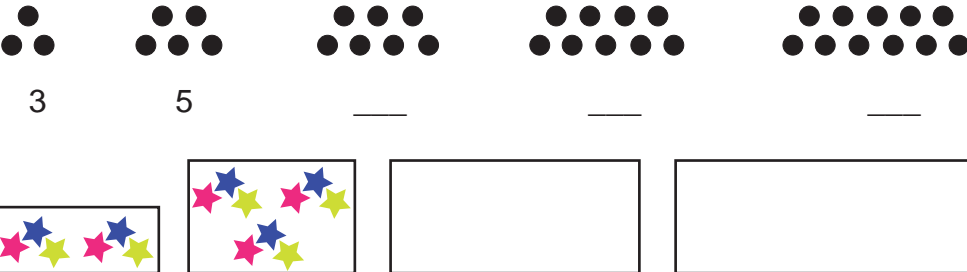
6)

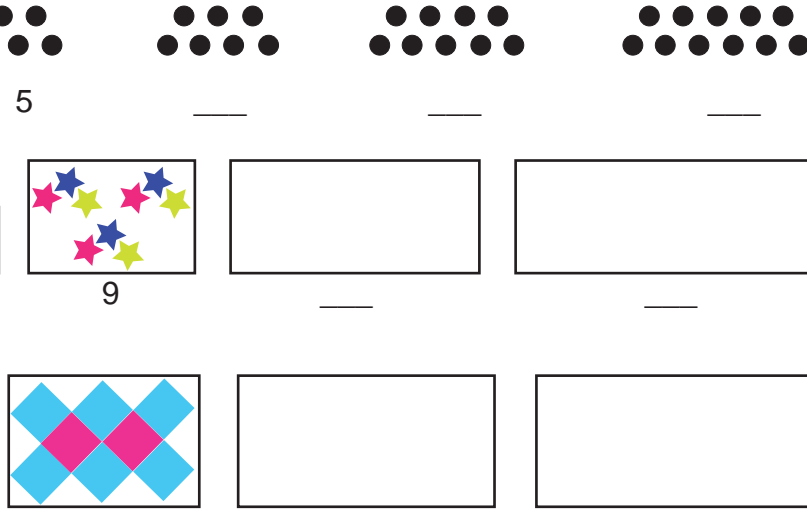
--	--	--	--	--	--	--	--

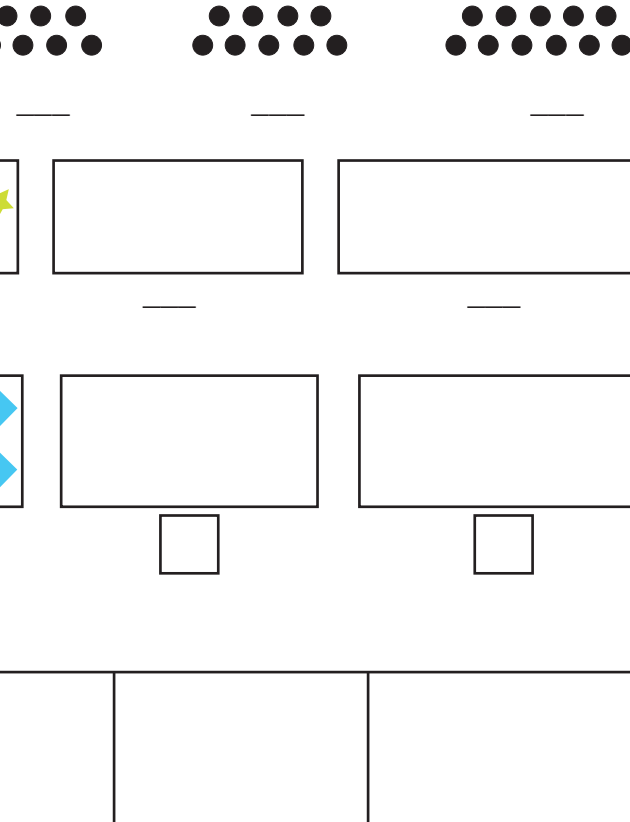
Patterns in Numbers

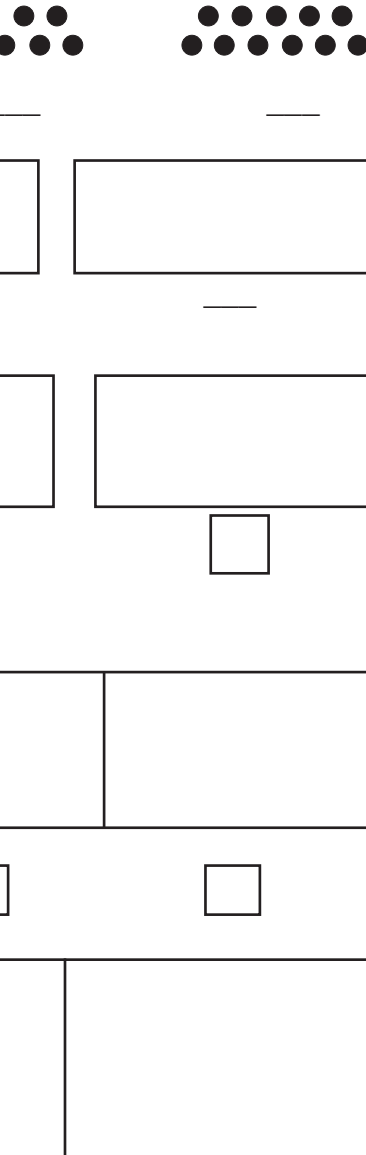
Complete the pattern and write the numbers.

1. 
 1 3 5 — — —

2. 
 3 6 9 — —

3. 
 2 5 8

4. 
 9 18

5. 
 1 2 + 2 3 + 3 + 3

Pattern is a set of shapes or numbers that are repeated again and again.

Number patterns in addition and subtraction

1) Observe the number patterns and fill in the blanks.

$$1 + 3 + 5 = 09$$

$$3 + 5 + 7 = 15$$

$$5 + 7 + 9 = 21$$

$$7 + 9 + 11 = 27$$

$$\underline{9 + 11 + 13 =}$$

$$\underline{\hspace{2cm}}$$

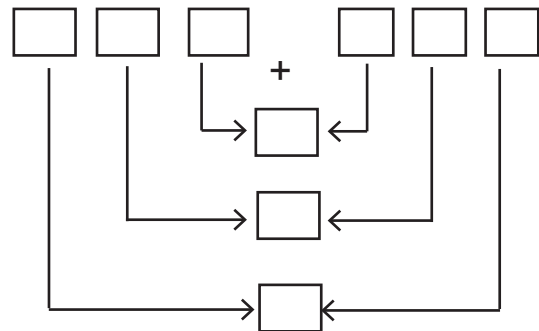
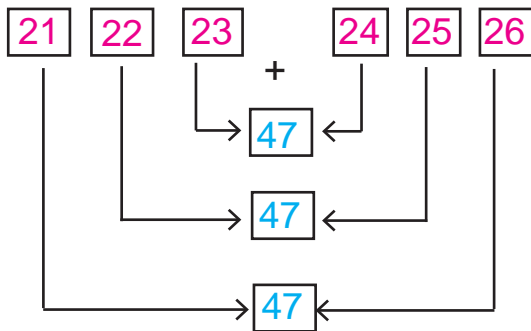
$$\underline{\hspace{2cm}}$$

$$\underline{15 + 17 + 19 =}$$

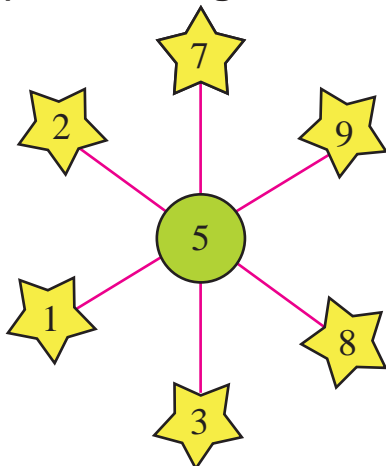
9, 15, 21, 27, _____, _____, _____, _____

2) Six number cards are taken in order and two numbers are added as shown below.

In the same way, take any six number cards in order and check the total.



3) Twinkling stars



In the figure given add the numbers in a straight line.

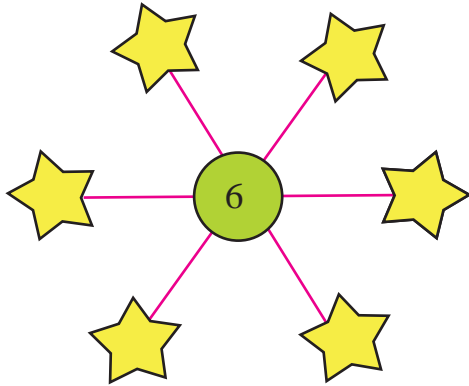
$$1 + 5 + 9 = 15$$

$$2 + 5 + 8 = 15$$

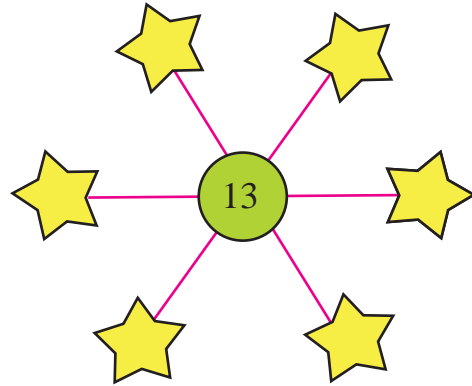
$$3 + 5 + 7 = 15$$



Fill in the following stars using the numbers given below to arrive at the same total.

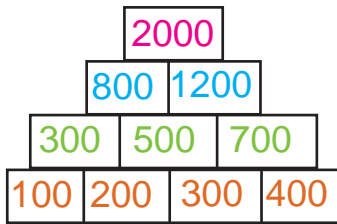


Total is 18. Use the numbers 3, 4, 5, 7, 8 and 9

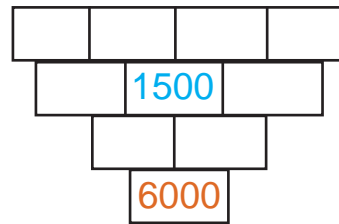


Total is 23. Use the numbers 9, 8, 7, 3, 2 and 1

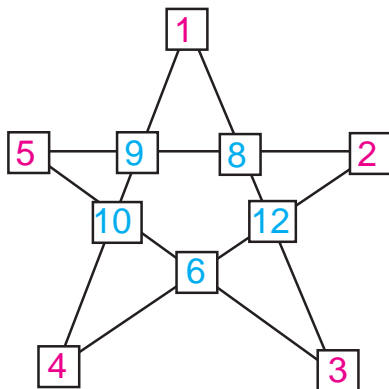
4) Build the blocks with numbers.



Complete the blocks.

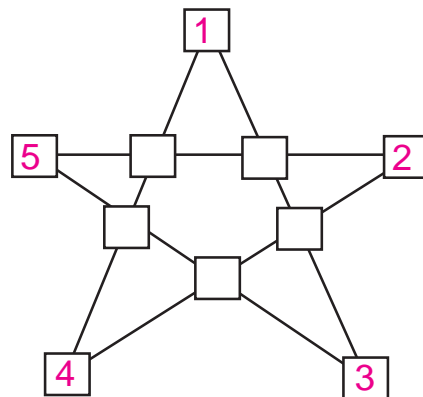


5) Magic star.



Sum of the numbers in each straight line is 24

Complete the magic star.



Sum is 30. Use the numbers 9, 11, 12, 13 and 15 in the empty boxes.

Fun with number patterns



Ram, will you try these puzzles?



Yes, I will. Yamini.

Write the numbers from 1 to 9 and reverse the order, add and observe.

$$\begin{array}{r} 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9 \\ +\ 9\ 8\ 7\ 6\ 5\ 4\ 3\ 2\ 1 \\ \hline 1\ 1\ 1\ 1\ 1\ 1\ 1\ 1\ 1\ 0 \end{array}$$

Do you find any pattern? Oh yes, one is repeated nine times followed by 0.

Write the numbers from 2 to 9 and reverse the order as shown and add. Enter the result and your findings.

$$\begin{array}{r} 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9 \\ +\ 9\ 8\ 7\ 6\ 5\ 4\ 3\ 2 \\ \hline \end{array}$$

Observe the number patterns and complete it.

$$(2 \times 2) - (1 \times 1) = 3 = 2 + 1$$

$$(5 \times 5) - (4 \times 4) = \underline{\quad} = \underline{\quad}$$

$$(3 \times 3) - (2 \times 2) = 5 = 3 + 2$$

$$(6 \times 6) - (5 \times 5) = \underline{\quad} = \underline{\quad}$$

$$(4 \times 4) - (3 \times 3) = 7 = 4 + 3$$


$$(7 \times 7) - (6 \times 6) = \underline{\quad} = \underline{\quad}$$

Fill in the table by increasing and decreasing 10 or 100.

826	726			426		226	
900			870	860			
310	320						380
	106	206					

Number patterns in multiplication and division

Observe the following pattern and complete it.

1) 

2)

1000, 500

1100, 550

1200, ____

1300, ____

1400, ____

1500, ____

3)

20 x 9, 18 x 10

30 x 9, 27 x 10

40 x 9, ____

50 x 9, ____

60 x 9, ____

70 x 9, ____

4)

2	4	8	16				
2	6	18	54				
2	8	32	128				
2	10	50	250				
2	12						

5) Magic square.

Take three multiples of ten say, 10, 30 and 50. Arrange the numbers as shown. Add the numbers in a straight line. The total is 90.

30	10	50
50	30	10
10	50	30

30
10
50
90

Complete the magic square.

In the same way, take any three multiples of ten, Arrange the numbers in squares such that when the numbers are added in a straight line or crosswise the total must be the same.

Number patterns in multiples of nine

Complete the 9th table.

1	x	9	=	9
2	x	9	=	18
3	x	9	=	27
4	x	9	=	----
5	x	9	=	----
6	x	9	=	54
7	x	9	=	63
8	x	9	=	----
9	x	9	=	----
10	x	9	=	----

Complete the addition.

0	+	9	=	9
1	+	8	=	--
2	+	7	=	--
3	+	6	=	--
4	+	5	=	--
5	+	4	=	--
6	+	3	=	--
7	+	2	=	--
8	+	1	=	--
9	+	0	=	--

What happens when you add the digits in the product?



Total is 9

The digits in ones place are 9, 8, 7, 6, 5, 4, 3, 2 and 1. They are in decreasing order.

The digits in tens place are 1, 2, 3, 4, 5, 6, 7, 8 and 9. They are in increasing order.

Record your observations after adding and check your findings.

- Sum of the digits of the product is _____
- The digits in tens place _____
- The digits in ones place _____
- The digits in tens place are in _____ order.
- The digits in ones place are in _____ order.

Fun with 9

- | | |
|-------------------------------|-------------------------|
| Take any three digit number | ▶ 736 |
| Multiply by 9 | ▶ $736 \times 9 = 6624$ |
| Add the digits in the product | ▶ $6 + 6 + 2 + 4 = 18$ |
| until a single digit is found | ▶ $1 + 8 = 9$ |



Practice

- 1) $437 \times 9 =$ _____ 2) $336 \times 9 =$ _____ 3) $167 \times 9 =$ _____



Grouping into nine

Teacher gave 41 pencils to Vishal and 36 to Varsha. Ask them to make bundles so that each bundle has 9 pencils.



Vishal had 5 extra pencils after bundling 41 pencils into 4 bundles

Varsha bundled 36 pencils into 4 bundles. There is no extra pencil.

Casting out nine

Complete the following.

$81 - 9 = 72$	\Rightarrow	$7 + 2 = 9$
$72 - 9 = 63$	\Rightarrow	$6 + 3 = 9$
$63 - 9 = 54$	\Rightarrow	_____
$54 - 9 = 45$	\Rightarrow	_____
$45 - 9 = 36$	\Rightarrow	_____
$36 - 9 = 27$	\Rightarrow	_____
$27 - 9 = 18$	\Rightarrow	_____
$18 - 9 = 09$	\Rightarrow	_____
$09 - 9 = 00$	\Rightarrow	_____

$89 - 9 = 80$	\Rightarrow	$8 + 0 = 8$
$80 - 9 = 71$	\Rightarrow	$7 + 1 = 8$
$71 - 9 = 62$	\Rightarrow	_____
$62 - 9 = 53$	\Rightarrow	_____
$53 - 9 = 44$	\Rightarrow	_____
$44 - 9 = 35$	\Rightarrow	_____
$35 - 9 = 26$	\Rightarrow	_____
$26 - 9 = 17$	\Rightarrow	_____
$17 - 9 = 08$	\Rightarrow	_____

When 9 is subtracted from multiple of 9, the remainder is a multiple of 9. The sum of the digits in the remainder is 9.

When 9 is subtracted from other than multiple of 9, the remainder is not a multiple of 9. The sum of the digits in the remainder is less than 9.



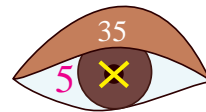
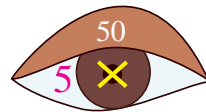
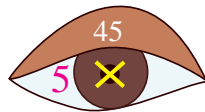
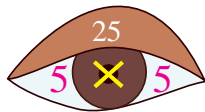
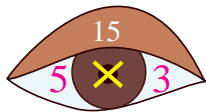
Practice

Fill in the following blanks.

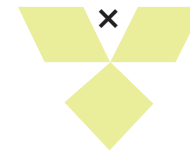
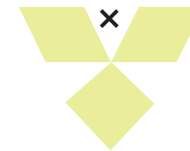
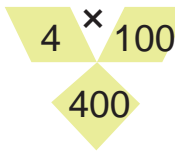
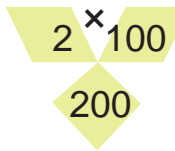
1)



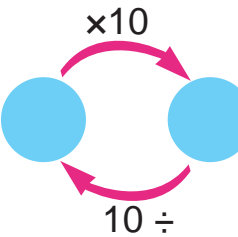
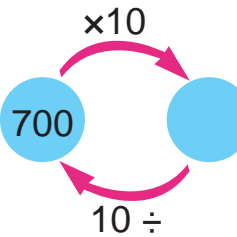
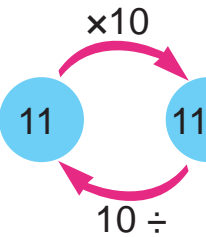
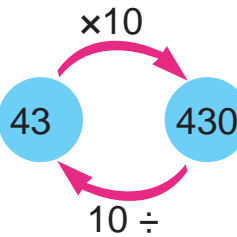
2)



3)

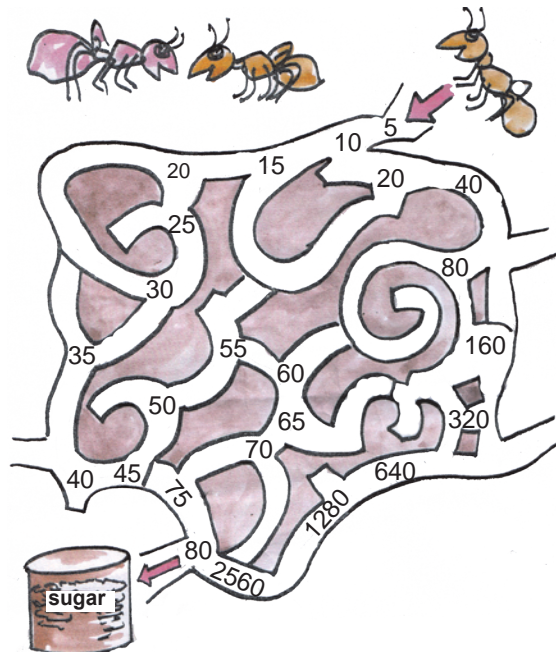


4)



Puzzle

Two paths are described using numbers. Show the paths for the ants to reach the sugar pot. Write the number patterns.

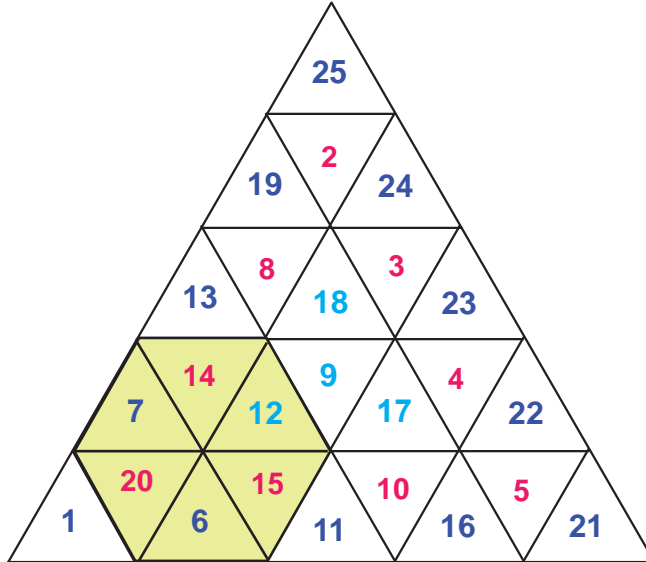


Lab activity

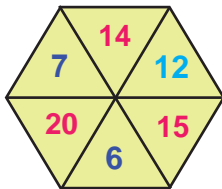


Look at the numbers given in the triangle.

The numbers from 1 to 25 are given in pattern.



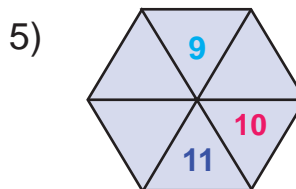
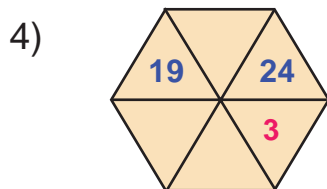
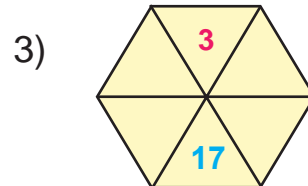
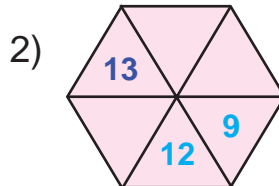
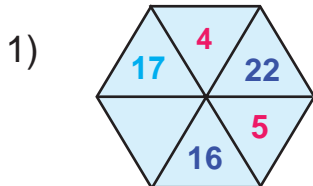
Take the numbers coloured in the shape and add.



$$7 + 14 + 12 + 15 + 6 + 20 = 74$$

$$\begin{array}{r} 7 \\ 14 \\ 12 \\ 15 \\ 6 \\ + 20 \\ \hline 74 \end{array}$$

Fill in the missing numbers to get the total 74 using the shape.



Revision



Complete the number patterns.

- 1) 9, 19, 29, 39, _____, _____, _____
- 2) 64, 55, 46, 37, _____, _____, _____
- 3) 19, 28, 37, 46, _____, _____, _____
- 4) 121, 222, 323, 424, _____, _____, _____
- 5) 609, 509, 409, 309, _____, _____, _____

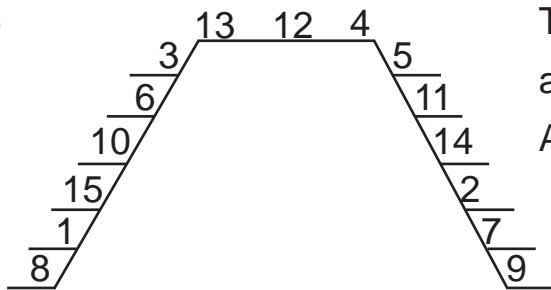
6)

1	13	3	12
15	9	4	10
7	2	16	8
14	6	11	5

Numbers from 1 to 16 are arranged in the square. Find the total of numbers vertically, horizontally and diagonally. Arrange the totals in increasing order. What do you find?

Observe and complete the following.

7)



The numbers from 1 to 15 are arranged in a horse shoe pattern. Add two consecutive numbers.

$$8 + 1 = 9 = 3 \times 3$$

$$1 + 15 = 16 = 4 \times 4$$

$$10 + 6 = 16 = \underline{\quad}$$

$$6 + 3 = \underline{\quad} = \underline{\quad}$$

$$3 + 13 = \underline{\quad} = \underline{\quad}$$

$$12 + 4 = \underline{\quad} = \underline{\quad}$$

$$4 + 5 = \underline{\quad} = \underline{\quad}$$

$$5 + 11 = \underline{\quad} = \underline{\quad}$$






$$14 + 2 = \underline{\quad} = \underline{\quad}$$

$$7 + 9 = \underline{\quad} = \underline{\quad}$$

6. DATA HANDLING

Pictograph

Children went to a zoo. They listed the animals seen in the zoo through a pictograph as shown here.

Monkeys	
Elephants	
Tigers	
Deers	
Bears	



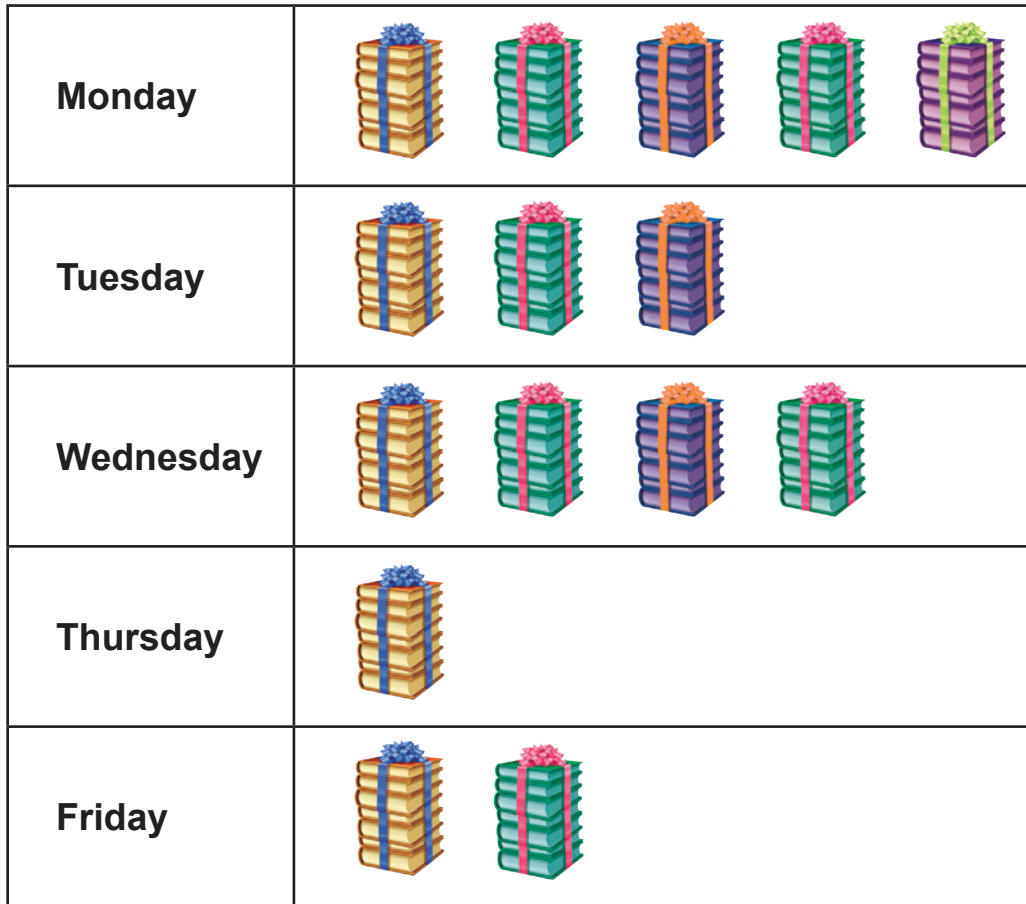
The number of animals seen by them in the zoo is given below:

- 1) Number of elephants = 10
- 2) Number of tigers = 15
- 3) Number of bears = 10
- 4) Number of deers = 25
- 5) Number of monkeys = 30



Practice

The following pictograph shows the number of books sold in a bookshop in 5 days. Answer the following questions from the pictograph.



represents 7

- 1) Number of books sold on Monday _____
- 2) Number of books sold on Tuesday _____
- 3) Number of books sold on Wednesday _____
- 4) Number of books sold on Thursday _____
- 5) Number of books sold on Friday _____

Pictograph - Another way.

We are in a Park



Children are playing and enjoying in the park.

- 1) 18 children are playing on the merry-go-round.
- 2) 12 children are skipping.
- 3) 16 children are sliding.
- 4) 2 children are playing in the see-saw.

■ represents 2 children. We can draw pictograph as follows.


Skipping	■ ■ ■ ■ ■ ■
Slider	■ ■ ■ ■ ■ ■ ■ ■
See-saw	■
Merry-go-round	■ ■ ■ ■ ■ ■ ■ ■ ■




Representation of information through pictures is called a **pictograph**.

Our favourite food.



Fill in the blanks using the pictograph given below.

 represents 3 children.

Idly	
Dosa	
Pongal	
Aappam	


- 1) ___ children like idly.
- 2) ___ children like dosa.
- 3) ___ children like pongal.
- 4) ___ children like aappam.
- 5) ___ is liked by many children.


Complete the pictograph.

Colourful shirts



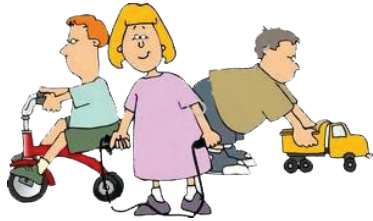
There are 40 yellow shirts, 20 blue shirts, 30 orange shirts and 60 green shirts in a textile shop.

 represents 10 shirts.

Yellow shirts	
Blue shirts	
Orange shirts	
Green shirts	

Circle chart

Children are playing with toys.



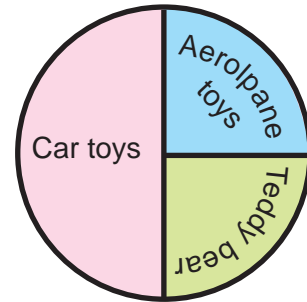
40 children are playing with toys.

Half of them are playing with car toys.

Quarter of them are playing with aeroplane toys.

One-fourth of them are playing with teddy bear toys.

This data is shown by the circle chart.



From the circle chart :

- 20 children are playing with car toys.
- 10 children are playing with aeroplane toys.
- 10 children are playing with teddy bear toys.

Complete the circle chart using the following data.

Children's day

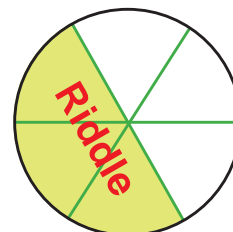


60 children participated in three competitions as given below.

30 of them participated in riddle competition.

20 of them participated in drawing competition.

10 of them participated in fancy dress competition.





Collection of data

Medal list of first five places of countries that participated in the Commonwealth Games held in New Delhi 2010.

Country	Gold	Silver	Bronze	Total
Australia	74	55	48	
India	38	27	36	
England	37	59	46	
Canada	26	17	32	
South Africa	12	11	10	

Answer the following from the table.

- Which country was in second place?
- Find out the total medals of each country.
- Which country got maximum medals?



Information collected in the form of numbers is called data.



Project

Write the number of students studying in your school.

Name of the school:			Date:
Std	Boys	Girls	Total
I			
II			
III			
IV			
V			
Total			

Answer the following from the table.




- Which class has more number of students? _____
- Which class has more number of boys? _____
- The total number of students is _____



Practice

1) Look at the pictograph and answer the questions.

Electronic items sold in a month in an electronic shop.

Television	
Air conditioner	
Refrigerator	




Each represents 20.

- How many televisions were sold?
- How many air conditioner were sold?
- How many refrigerator were sold?
- Which electronic item was sold more?

2) Prepare a pictograph using the following data. In a party children ate. 48 laddus, 56 jangiris, 64 gulabjamuns and 80 mysorepa.



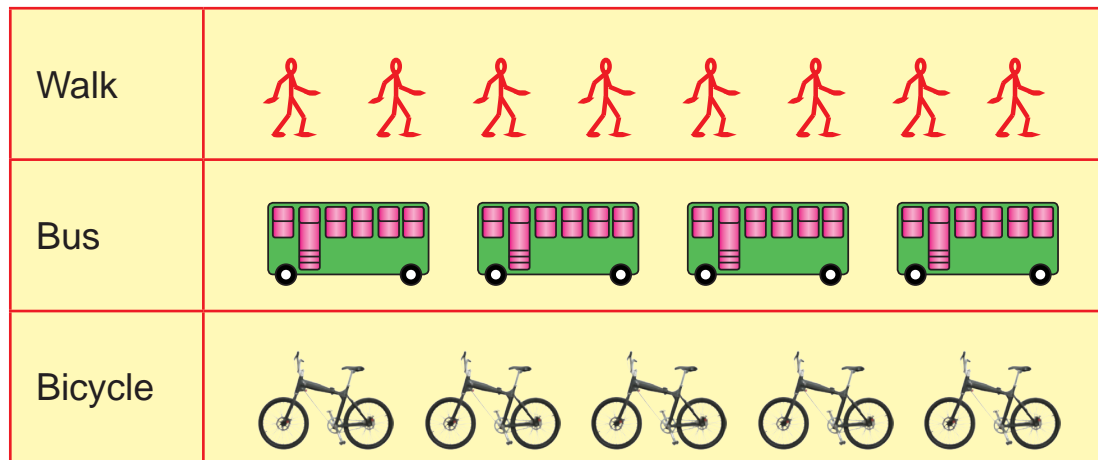
Each represents 8

- 3) If  represents 10 vehicles prepare a pictograph for 50 cars, 30 motor bikes, 40 bicycles and 30 lorries are manufactured in a factory.
- 4) There are 60 children in a class. 15 students are girls and the remaining are boys. Draw a circle chart.
- 5) There are 320 houses in a colony. Half of the houses are painted in two different colours. One-fourth of the houses are painted in three different colours. The remaining houses are painted in many different colours. Prepare a circle chart.

Revision



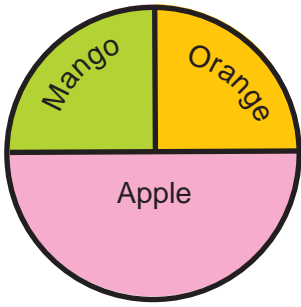
1) Children come to school on foot, by bus and by bicycle. Answer the question from the pictograph given.



- ____ children come to school on foot.
- ____ children come to school by bus.
- ____ children come to school by bicycle.
- Most of the children come to school by ____.

2) An author has 120 Tamil story books, 30 English story books, 90 Hindi story books and 80 Urdu story books. Prepare a pictograph.

3)



A Fruit Juice vendor uses 100 fruits for making juice. Number of fruits used are given by circle chart. Find the number of mangoes, oranges and apples.

4) In a residential apartments, $\frac{1}{5}$ of people have got car, $\frac{3}{5}$ of people have got motor cycle and the remaining people have got bicycle. The total number of people is 500. Draw a circle chart and find out the number of people who have got car, motor cycle and bicycle.