APPENDICES

Specific Objectives: - from the chapter – triangle .

The learner should be able to: -

(i)   Identify the pair, triplet etc. of collinear & non- collinear points in the given pts or figures.

(ii)   Draw required no. Of collinear & non- collinear pts.

(iii)   Define collinear & non- collinear pts.

(iv)   Identify & count the no. Of triangle from given figures.

(v)   Draw triangle from three non-collinear pts.

(vi)   Name the sides, angles and vestices.

(vii)   Define the triangle.

(viii)   Draw the infer/conclude that "The sum of the length of any two sides of a triangle is greater than the length of third side." Based on their class work.

(ix)   Identify the set of line segments. Which form the triangle.

(x)   Apply the above inference to any other given triangle, to solve the numerical problem.

(xi)   Draw the infer/conclude that " The sum of the measures of three angles of a triangle is $180°$ " based on their class work.

(xii)   Identify the set of angles, which can form the triangle.

(xiii)   Apply the property to any other given triangle to solve the numerical problem.

(xiv)   Identify the type of triangle, Classified on the basis of sides.

(xv)   Identify the type of triangle, classified on the basis of angles.

(xvi)   Recall definition for various triangle's like; scalene. Equilateral, isosceles, obtuse, acute, right angle triangle.

Class & section! -

Q-1 Identify the points collinear with A in given figure & mention the name of the points.

```
        E           D
        •           •

    A       B       C
    •       •       •
```
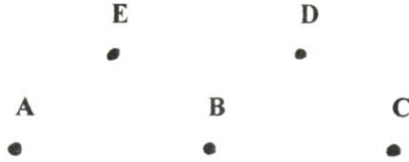
Solution - In figure- (I)

Collinear points with A = ……, ……..., ………,…………. ,………….,

Q-2 consider the given figure & write TRUE or FALSE.
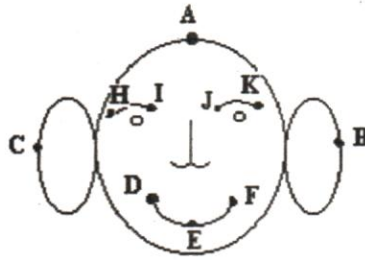
Solution - i. H, I, J are collinear-………………………

ii. A, J & E are non-collinear.- ……………………

iii. C, B are collinear.- ……………………

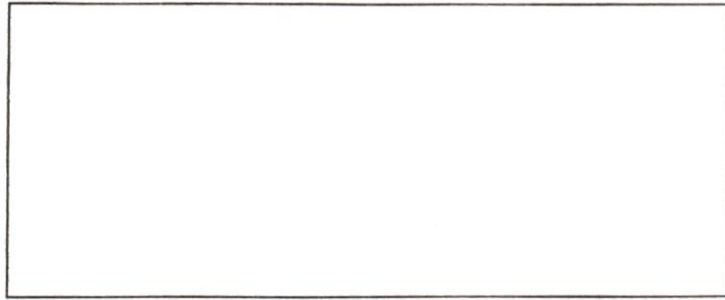iv. D, E, F are non-collinear.-………………………

Q-3 Draw a straight line & mark 4 collinear points E, F, G, H on that, in given box.

Solution-
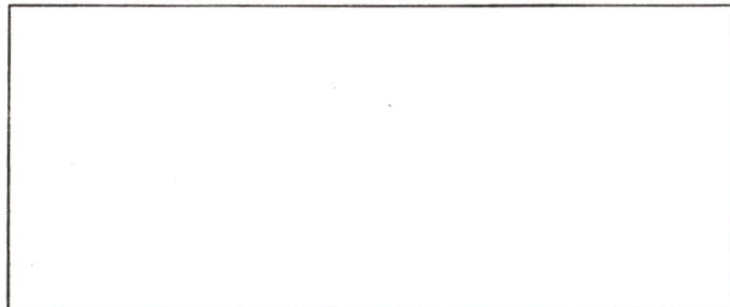
Q-4 Mark 3 non-collinear points A, B , C in given box. Join the each marked point & identify the figure formed.
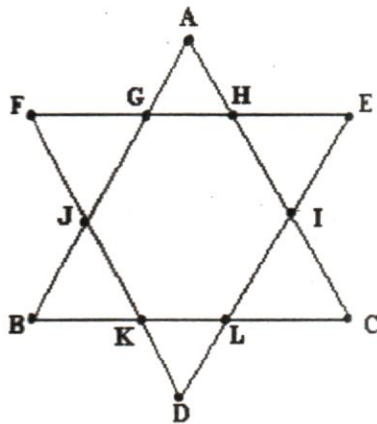
Solution-

Name of formed figure- ....

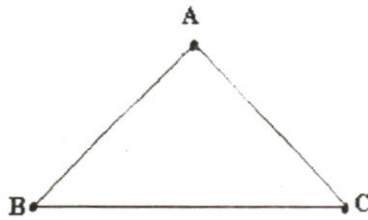**Q-5** Fill in the blanks-

(Collinear, Non-collinear, Same, Not,)

The points which are on the …………….. line are called…………………points.

Q-6 Count the triangle in given figure: -

Solution - Number of triangles- ……………………….

Q-7 In a triangle:-

(i)- How many line segments are there? Name them.

Ans- No. of line segments ....

Names of line segments ...., ...,

(ii) - How many vertices are there? Name them.

Ans- No. of vertices = ...

Names of vertices......., ..., ...,

(iii) -How many angles are there? Name them.

Ans- No. of angles ....

Names of angles ....

Q- 8 In the given case , Is the construction of triangle possible ?

(i)- AB = 3 C.M., BC = 4 C. M., CA = 5 C.M.
(ii)- AB = 4 C.M., BC = 2 C.M., CA = 1 C.M.

Solution -

(i).

(ii).

Q-9 Identify the set of angles, which can from the triangle :

    (i). $\angle A = 60^\circ$, $\angle B = 60^\circ$, $\angle C = 60^\circ$

    (ii). $\angle A = 90^\circ$. $\angle B = 75^\circ$, $\angle C = 45^\circ$
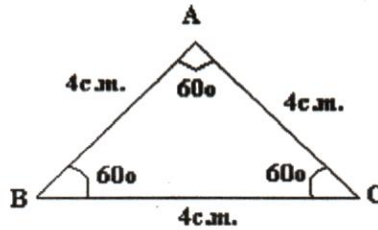
Solution -   (i).

    (ii).

Q – 10 The measures of two angles $\angle A$ and $\angle B$ of the triangle are 45° & 65° find the measure of the third angle of the triangle .
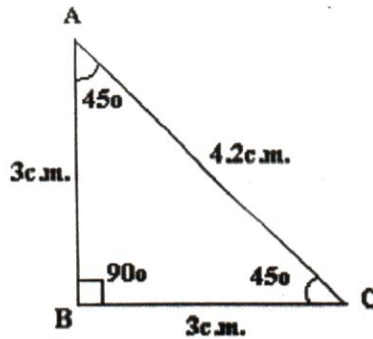
Solution –

Q – 11 Identify the triangle (Scalene, Equilateral, isosceles, obtuse, acute, right angle triangle.)

(i). Name of triangle on the basis of sides - ………………….…..

Name of triangle on the basis of angle- ……………………..

(ii). Name of triangle on the basis of sides - ……………………..

Name of triangle on the basis of angle - ……………………..

DAY -1

Specific objectives :

After the completion of the class, students will be able to

(i) Identify the tyiplets etc. collinear & non-collinear pts in the geven pts or figure.

(ii) Draw required of collinear & non-collinear pts.

(iii) Define collinear & non-collinear pts.

----

(1) Identify the pair of collinear & triplet of non-collinear pts in the given figure & mention the name of the pts.

(i).   .C

        •   •
        A   B

    for e.g.

Solu" - Collinear pts = A and B.
                         B & C.
                         C & A.
          •   •
    Non Collinear pts = A. B. C

(I)   fig (1) ⌐

      A •   • B

   F.   .C
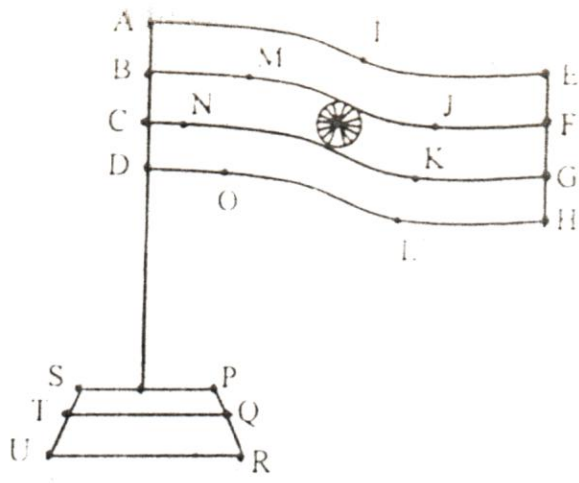

      E •   • D

Solu" :- Collinear pts :- ------------------------------

Non collinear pts :-   ------------------------------
       E   ------------------------------

      Figure (ii) ⌐
            A •

                B •

                  C •

                    D •

                       E •
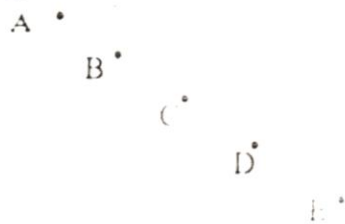
Solu" :_ Collinear pts --------------------
        Non collinear pts. --------------------

(2)

(i) Identify the collinear pts in given above figure of flag & write them in give space.

Solu^n Collinear pts. -

-

-

-

-

-

(ii) Identify the non-collinear pts in given above figure & write hem in the given space.

Non collinear pts. -

-

-

-

(3)
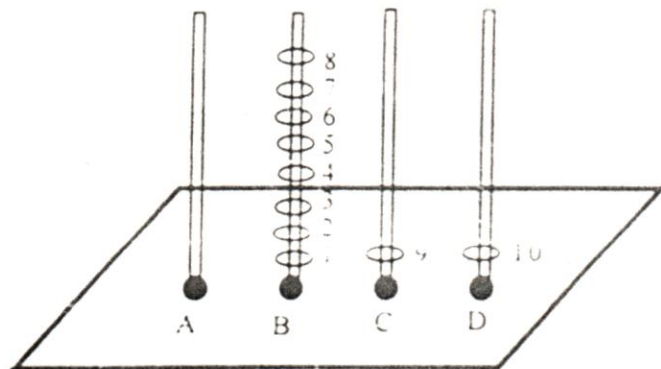
(i) In this figure, taking beads as a point & also A,B,C,D as a point. Identify the collinear points & write the name of that points in given space.
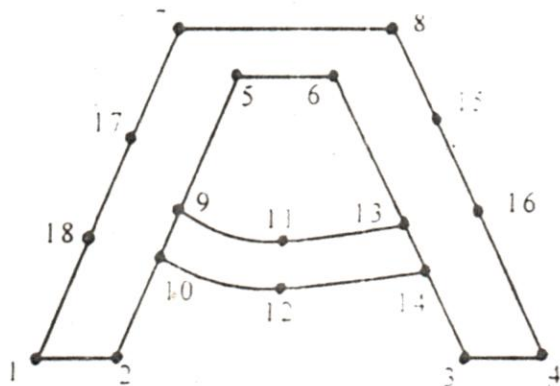
Collinear points   -

        -

        -

        -

(ii) Similarly identify the non-collinear points & write them in the given space.

Non-collenear points   -

        -

        -

        -

(4)

This is a figure of alphabet A. In this identify the collinear & non-collinear points & write them in the given space.

Collinear points   -

        -

        -

        -

        -

Non-collinear points   -

        -

        -

        -

(5) (i) Mark three collinear points on the given striaght line A B

A   B
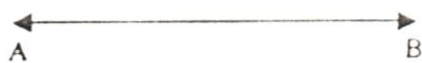
(ii)   Mark five points on the given fig. in which two points must be non-collinear & also write them in given space.

Collinear points --

Non collinear points ----------------------------------

(6)   Mark three pts A, B & C in such a way, a point is non collinear. Mark them in given block.
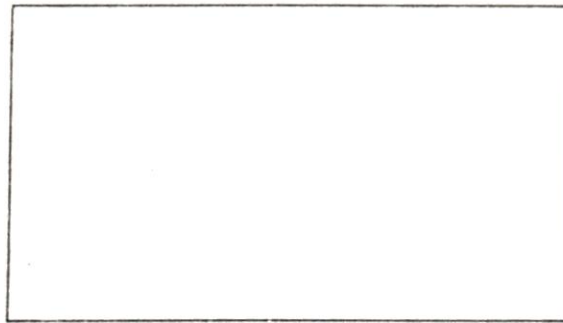
(7)   Draw a straight line of any length of your choic. Now mark five collinear points on this straight line
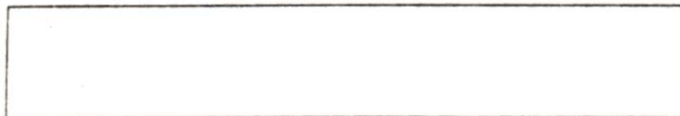
(8)
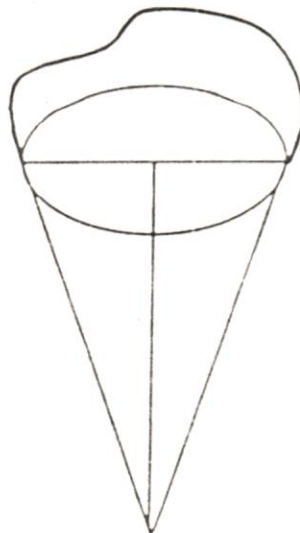
This is the figure of icecreame. Draw 10 points on it, in such a way that there must be some points collinear & some non-Collinear & write their name in given space

Collinear points -

  -

  -

  -

Non collinear points -

  -

  -

  -

(9) State whether the given points are collinear or non-collinear & why ?

A   B   C   D   E
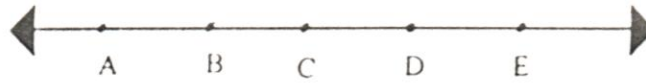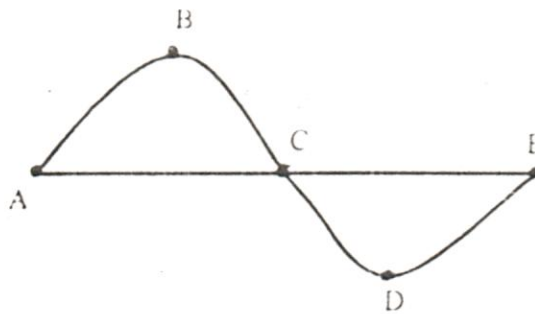
Fig (i)

Fig (ii)
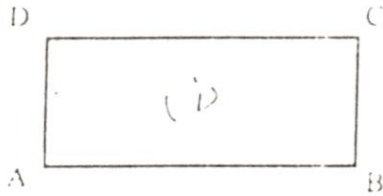
Solu⁰   Fig (i) -
           Fig (ii) -

DAY - 2

Specific Objectives :-

After complition of this class, Students will be able to -

1. Identify triangle from given figures.
2. Draw triangle from three non-collinear points.
3. Name the sides, angles and vertices.
4. Count the no. of △'s in a given figure.
5. Define the triangle.

---

(1) In the given following figures. Identify the triangles & write their name.
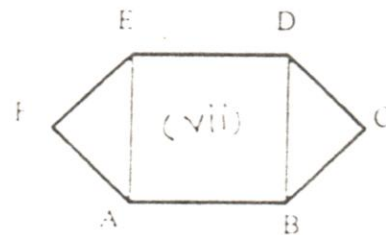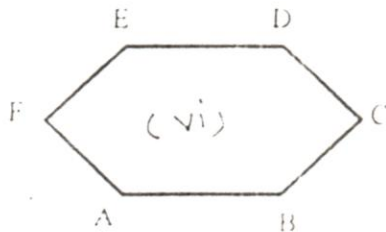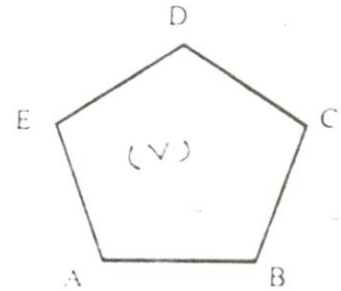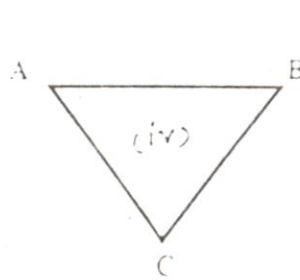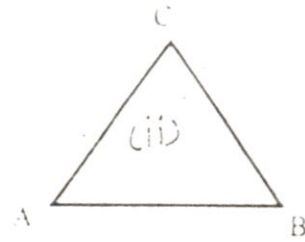
For e.g.

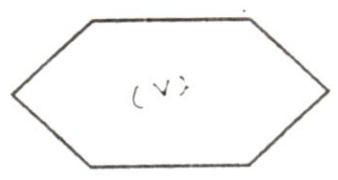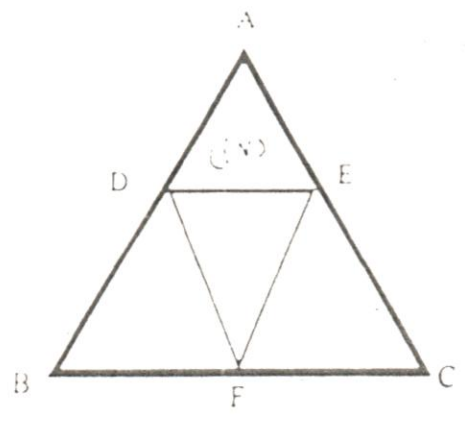Ans. (i)   is not triangle.
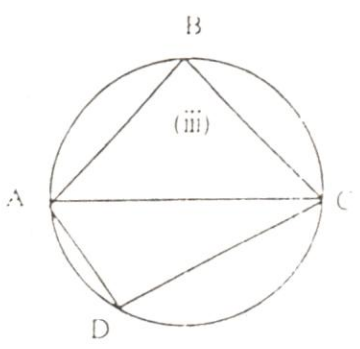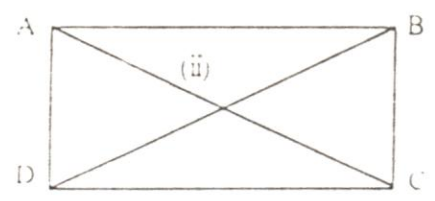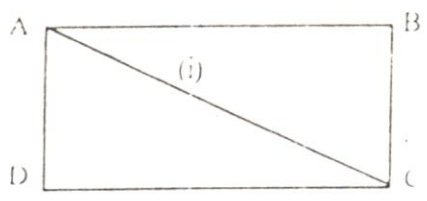
(ii)

(iii)

(iv)

(v)

(vi)

(vii)

(2) In the geometry box, there are a scale, a protractor, a compass & two set rquares. Write the name of that instrument which is in shape of triangle.
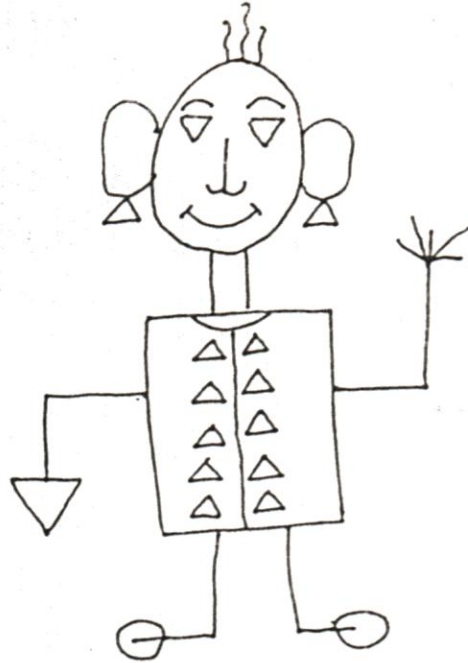
Ans.

(3) Count the triangles in given figures

(i)

(ii)

(iii)

(iv)

(v)

Ans.   In fig. (i)
The no. of triangles
In fig. (ii)
The no. of triangles
In fig. (iii)
The no. of triangles
In fig. (iv)
The no. of triangles
In fig. (v)
The no. of triangles

(4) Identify & count the no. of triangles in the given figure. of Mr. math.

Ans.   No. of triangles in the face of Mr. Math –
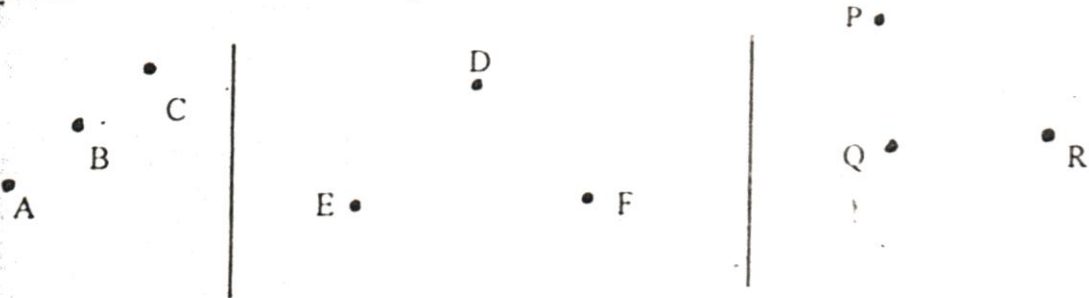

        No. of triangles in the ear of the Mr. Math –

        No. of triangles in the smoach of the Mr. Math –

        No. of triangles in the hands of the Mr. Math –

        No. of triangles in the legs of the Mr. Math –

        ----

5.   In which of the following cases, can you draw a triangle having three points.
    (Hint - first, join the points & see.)

For example :-

Ans:- Is fig (i) a triangle - yes / No.

       Is fig (ii) a triangle - yes / No.

       Is fig (iii) a triangle - yes / No..

6. Mark three non-cdlinear pts. On this paper & from them, draw a triangle.
Ans.

7. In the following figure
(i) Name the line segments in the given triangle ABC
Ans.

(ii) Vertices the triangle ABC
Ans

(iii) How many sides are there in the ABC ?
Ans

(iv) Write down the name of sides .

(iv) Write down the name of vertices ·
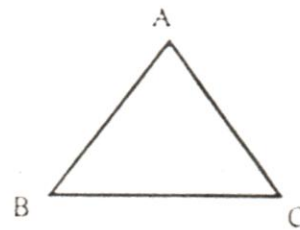Ans

(v) Write down the name of vertices .
Ans.

(vi) How many angles are there in the ABC ?
Ans

(vii) Write down the name of angles of triangle ·
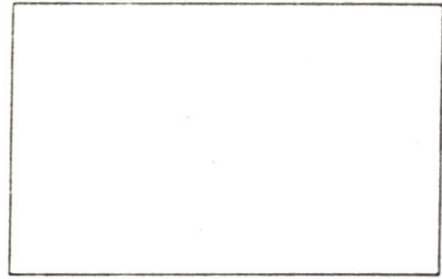Ans.

(8)   Draw a triangle in the given block & write down the name of sides, vertices & angles.
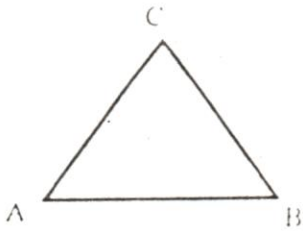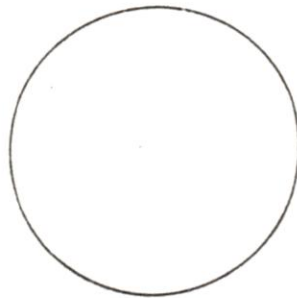
Ans.   Name of sides -

       Name of vertices

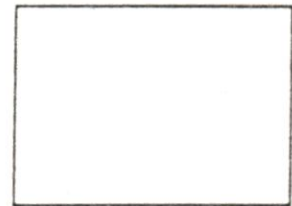   Name of angles

(9)   Identify the triangle in the given figure & state, why it is triangle ?

(i)   (ii)   (iii)

(i) .

(ii) .

DAY-3rd

Specific Objectives :-

After the complition of ths class, students will be able to

(i) ~~Draw the infer~~/Conclude that "The sum of the length of any two sies of a triangle is greater than the length of third side." based on their class work.

(ii) Identify the set of line segments, which form the triangle.

(iii) Apply the above inference to any other given triangle to solve the numerical problem.

(Every student have five figures of triangle of different measures. This was the home work of day 2nd

Achivity : According to your figeres of triangle, fill in the cells of the following table :-

A	B	C	D	E	F	G	H	I	J	K
Sr. No. of triangle	Length of 1st side (S_1)	Length of 2nd side (S_2)	Length of 3rd side (S_3)	Sum of length of $(1^{st}+2^{nd})$ (S_1+S_2)	Sum of length $(2^{nd}+3^{rd})$ (S_2+S_3)	Sum of length $(3^{rd}+1^{st})$ (S_3+S_1)	Tick $(\checkmark)$ which is correct $(S_1+S_2>s3)$	Tick $(\checkmark)$ which is correct $(s_2+s_3>s_1)$	Tick $(\checkmark)$ which is correct $(s_3+s_1>s_2)$	"The sum of length of any two sides of a triangle is greater then the length of the third side." .If you agree, then write 'Yes', If not, then write 'No'
1.							Yes/No	Yes/No	Yes/No	
2.							Yes/No	Yes/No	Yes/No	
3.							Yes/No	Yes/No	Yes/No	
4.							Yes/No	Yes/No	Yes/No	
5.							Yes/No	Yes/No	Yes/No	

(2) In which of the follwing case. the construct of a triangle is possible ?

(i)   AB = 6 Cm.   BC = 8 Cm.   CA = 10 Cm.
(ii) AB = 12 Cm.   BC = 5 Cm.   CA = 13 Cm.
(iii) AB = 2 Cm.   BC = 4 Cm.   CA = 1 Cm.
(iv) AB = 4 Cm.   BC = 3 Cm.   CA = 5 Cm.

For Example

Slu^n ;-   (i) $AB + BC = 6 + 8 = 14$ $BC + CA = 8 + 10 = 18$ $CA + AB = 10+6=16$

                     $CA = 10$ $AB = 6$ $BC = 8$

                     $= AB + BC > CA$ $= BC + CA > AB$ $CA+AB>BC$

              = Triangle is possible.

(ii)

(iii)

(iv)

(3) Given AB=2 Cm.   BC = 5Cm.   CA = 8 Cm.
    are the line regments.

    (i)   Is AB + BC > AC = ----------------------------(Write Yes/No which is correct)

    (ii)   Is BC + CA > AB = -------------------------- ("   )

    (iii) Is CA + AB > BC = -------------------------- ("   )

In above case do you agree with that the sum of the lenght of two side is always greater than the length of third side.

= Yes / No (.Tick (✓) which is correct)

There fore In above case, Is construction of triangle is possible ?

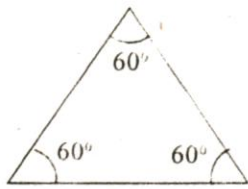= Yes/ No (Tick (✓) which is correct)

Specific Objectives :-

After the completion of this class, students will be able to -

(i)   Draw the infer/Conclude that "The sum of the measures of three angles of a triangle is 180."
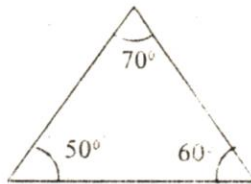Based on their class work.

(ii)   Identify the set of angles, which can form the triangle.

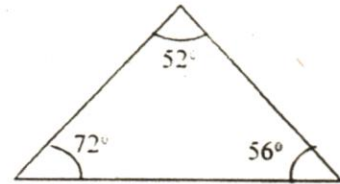(iii)   Apply the property to any other given triangle to solve the numerical problem.
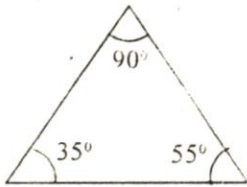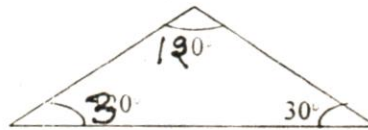
Activity (1)

Accordking to above figures of tringles fill the cells of the following table :-

Sr. No of triangle	Measure of the			Sum of the (1st+2nd+3rd) angle	The sum of the measures of three angles is 180. (Tick(✓) which is correct)
	1st angle	2nd angle	3rd angle		
1.					Yes/No
2.					Yes/No
3.					Yes/No
4.					Yes/No
5.					Yes/No

(2) True of False.

(i) The sum of measures of three angles of triangle greater than 180^0 = -----------------------

(ii) The sum of measures of therr angles of triangle is less than 180^0 = --------------------------

(iii) The sum of mesures of three angles of triangle is aways equal to 180^0 = --------------------

(3) In the given cases the construction of tringals is possible or not.

(A) $\angle(1) = 62^0$ (B) $\angle(1) = 46^0$ (C) $\angle(1) = 40^0$

$\angle(2) = 52^0$ $\angle(2) = 36^0$ $\angle(2) = 60^0$

$\angle(3) = 94^0$ $\angle(3) = 118^0$ $\angle(3) = 70^0$

Soluⁿ (A) $\angle(1) + \angle(2) + \angle(3)$ = -----------------------------

Is $\angle(1) + \angle(2) + \angle(3) = 180^0$

= Yes/No (Tick (✓) which is correct)

The construction of triangle is possibel.

= ---------------------------------- (Write Yes or No.)

(B) $\angle(1) + \angle(2) + \angle(3) =$ --------------------------------

Is $\angle(1) + \angle(2) + \angle(3) = 180^0$

= Yes/No (Tick (✓) which is correct)

The construction of triangle is possible.

= ------------------------------------ (Write Yes or No.)

(C) $\angle(1) + \angle(2) + \angle(3) =$ ------------------------------

Is $\angle(1) + \angle(2) + \angle(3) = 180^0$

= Yes/No (Tick (✓) which is correct)

The construction of triangle is possible.

= ------------------------------------ (Write Yes or No.)

(4) Fill the following :

In a triangles.

	$\angle$ A	$\angle$ B	$\angle$ C	= $\angle$ A+B+C
1.	50^0	50^0	--	180^0
2.	-	60^0	72^0	180^0
3.	120^0	30^0	-	180^0
4	72^0	36^0	72^0	-

(5) In a triangle ABC. The two angles are $\angle$A = 100^0 $\angle$C = 30^0. Find the measure of third angle B of triangle ABC

Solu^n

Specific Objectives: -

After the completion of the class, the students will be able to-

1. Identify the type of triangle, classified on the basis of sides.
2. Identify the type of triangle, classified on the basis of angles.
3. Real definition for various triangles like; scalene, equilateral, isosceles, obtuse, right angled triangle.

1- In the given figures

(A) Measure the sides of triangles and them on it.

For example

4 c.m.   5 c.m.

4 c. m.

(i)

(ii)

(iii)

(iv)

(v)

(vi)

(vii)
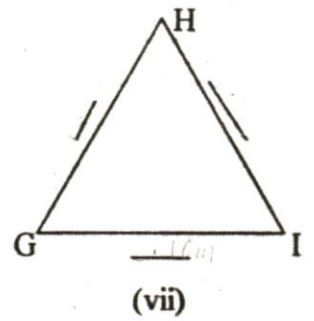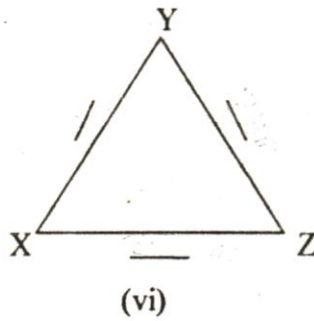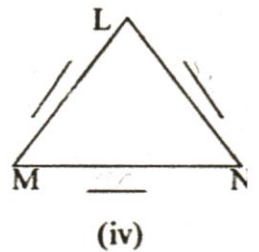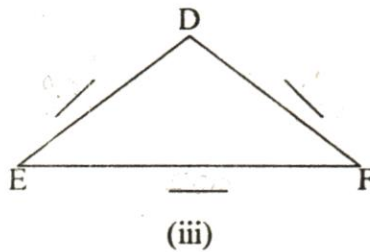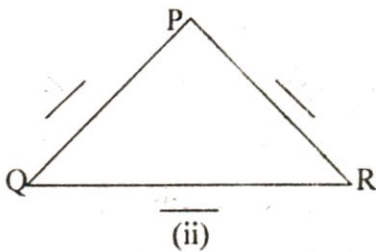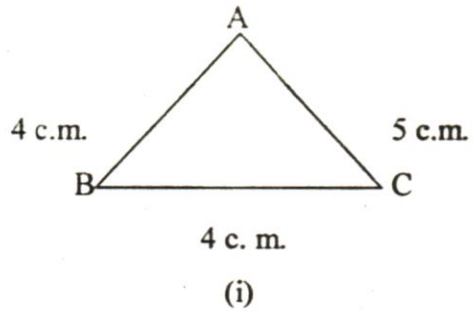
(B) Write, whether the triangles are scalene, isosceles or equilateral.

(i)
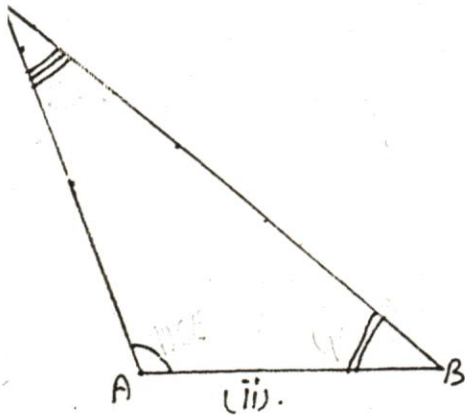
(ii)

(iii)

(iv)

(v)

(vi)

(vii)

2-   In the given figures
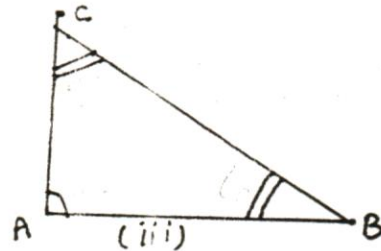
(A)   Measure the angles of triangles, and write before them.
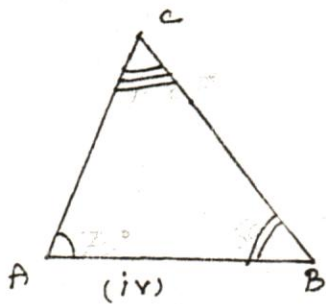   For example
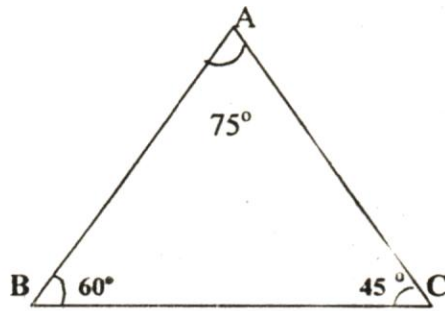
(i)
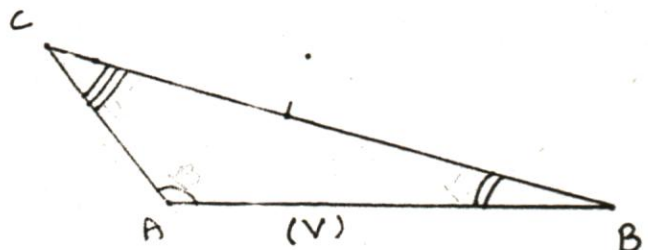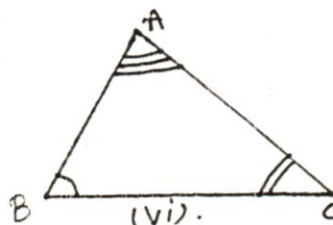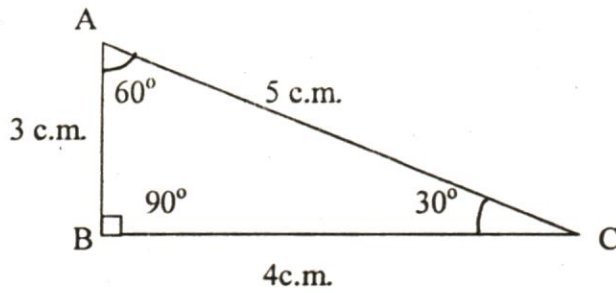

(ii).

(iii)

(iv)

(V)

(vi).

(B)   Write, whether the triangles are acute triangle, obtuse triangle, right-angled triangle.
(i)
(ii)
(iii)
(iv)
(v)
(vi)
(vii)

3- Identify the following figures of triangles & define on both basis.

(i)

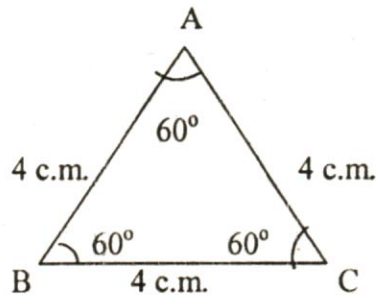Solu:- Name of triangle on the basis of angle = ---------------------------

Name of triangle on the basis of sides = ---------------------------

(ii)

Solu :- Name of triangle on the basis of angle =---------------------------

Name of triangle on the basis of sides = ---------------------------

(iii)
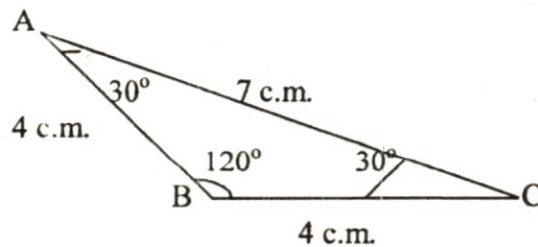
Solu:- Name of triangle the basis of angle =---------------------------

Name of triangle the basis of sides = ---------------------------

(iv)
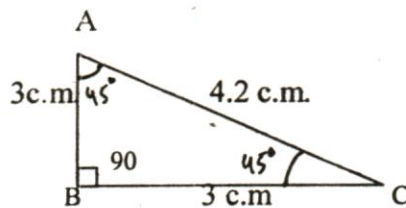
Name of triangle on the basis of angle = -------------------------

Name of triangle on the basis of sides =----------------------------

(v)
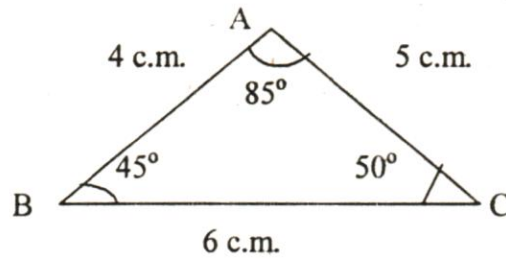
Name of triangle on the basis of angle = --------------------------

Name of triangle on the basis of sides = --------------------------

4- **Match the following :-**

1.	A triangle with one angle as abtuse is called	1.	obtuse triangle.
2.	A triangle is called with all angles as acute.	2.	Equilateral triangle.
3.	A triangle with all sides of different lengths is called	3.	Isosceles triangle
4.	A triangle with two sides of same lengths is called	4.	acute triangle
5.	A triangle with one angle as right angels called.	5.	Scalene triangle
6.	A triangle with all sides of same lengths is called	6.	right triangle

Identify the following figures of triangles and define them.

(i) Triangle ABC with AB = 4 c.m., AC = 7 c.m., BC = 5 c.m.

(ii) Triangle ABC with AB = 5 c.m., AC = 5 c.m., BC = 7 c.m.

(iii) Triangle ABC with AB = 6 c.m., AC = 5 c.m., BC = 6 c.m.

(iv) Triangle ABC with angle A = 85°, angle B = 45°, angle C = 50°

(v) Triangle ABC with angle A = 60°, angle B = 90°, angle C = 30°

(vi) Triangle ABC with angle A = 35°, angle B = 110°, angle C = 35°
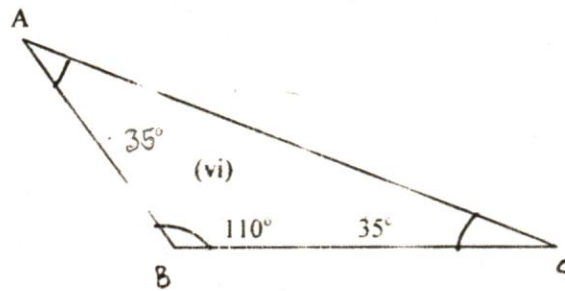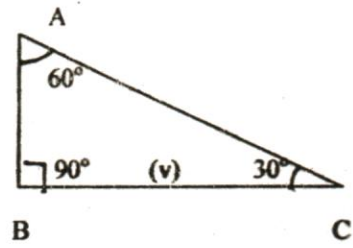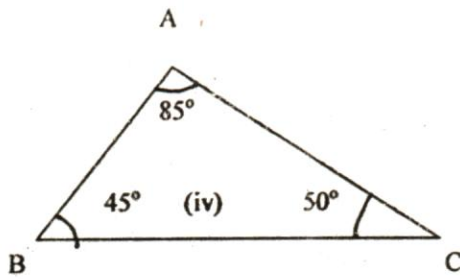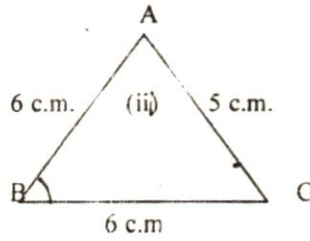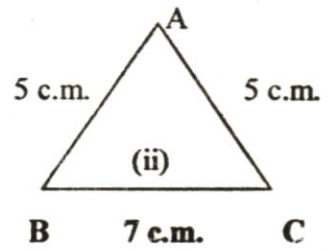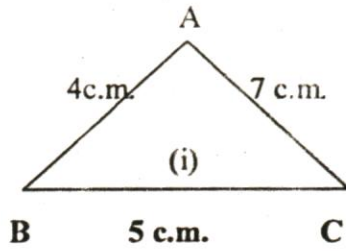
i)

(ii)

(iii)

(iv)

(v)

(vi)

7-   Answer the llowing   Yes/No

(i)   Can a triangle have two right angles ? --------------------------------

(ii)   Can a triangle have two obtuse angles? ------------------------------

(iii)   Can a triangle have one obtuse and one right angle? ---------------------

POST-TEST

Q.1 Identify the points collinear with 'P' in the given fiqure & mention the name of the points.

Collinear points with 'P' = ------------------, ------------------, ------------------,.

------------------, ------------------,

Q.2 Consider the given figure & write **TRUE or FALSE**.
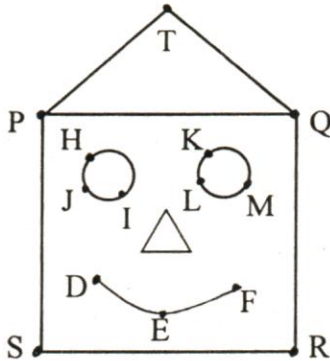
(i) H, I, J are collinear. ------------------------

(ii) D, E, F are non collinear --------------------------

(iii) K, L, M, R, are non- collinear. --------------------------

(iv) P, S, R are collinear. ------------------------------

Q.3 Draw a straight line & mark 4 collineare points P, Q, R, S on that in given space.
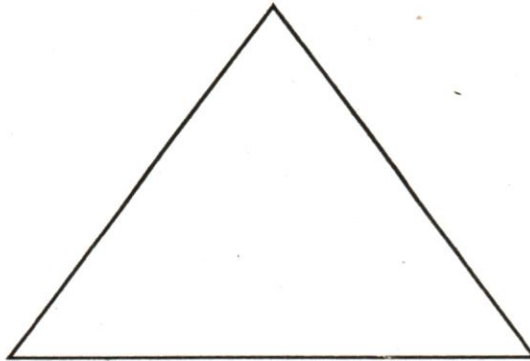
(iii)   How many angles are there ? Name them.

Ans   No. of angles -..

Names of angles -...................................

Q.8   In the given case Is the construction of triangle possible ?

(i)   AB = 4 Cm.   BC = 5 Cm.   CA = 6 Cm.

(ii)   AB = 5 Cm.   BC = 3 Cm.   CA = 1 Cm.

Solu" :   (i)

(ii)

Q.9   Identify the set of angles, which can form the triangle

$\angle$ A = 75⁰ $\angle$ B = 65⁰ $\angle$ C = 40⁰

(ii) $\angle$ A = 85⁰ $\angle$ B = 110⁰ $\angle$ C = 35⁰

Solu" :   (i)

(ii)

Q.10   The measures of two angles $\angle$ A & $\angle$ B of a triangle are 40⁰ & 60⁰. find the measure of the third angle of the triangle.

Solu" :