BASIC GEOMETRICAL CONCEPTS

We have learnt in earlier classes about the shapes around us.
Let us recap some of the plane shapes.

1. 

Blackboard has a rectangular shape.

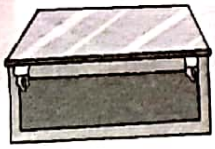
2. 

Wheels of a bicycle have a circular shape.

3. 

Traffic sign has a triangular shape.

We also find solid shapes around us.

1. 

Box has a cuboidal shape.

2. 

Tank has a cylindrical shape.

3. 

Funnel has a conical shape.

Activity-1

Summative Assessment Based On CCE — Skills / Aspects – Concept, Written work

Do you remember . . . . . .

1. Look at the shapes and complete the sentences.

(a) 

Rectangle

(i) A rectangle has .....4..... sides.

(ii) A rectangle has .....4..... vertices.

(iii) The opposite sides of a rectangle are equal.

(b) 

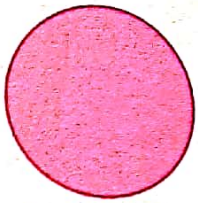
Triangle

(i) A triangle has .....3..... sides.

(ii) A triangle has ...3..... vertices.

(c) 

Square

(d) 

Circle

(i) A square has 4 sides.

(ii) A square has 4 vertices.

(iii) All sides of square are equal.

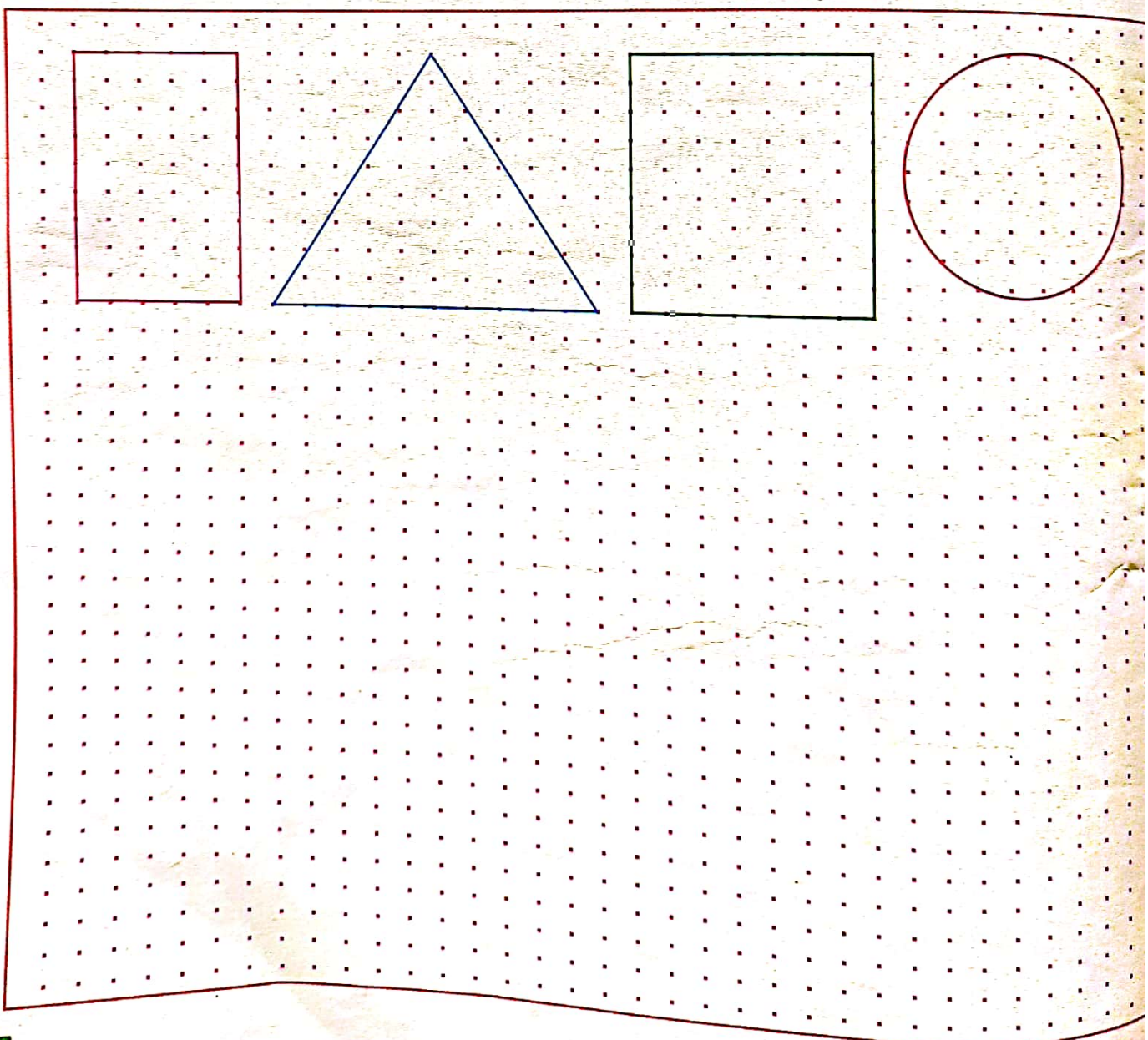
(i) A circle has no sides.

(ii) A circle has no vertices.

2. Draw and colour the pictures of objects whose shape is

(a) rectangular (b) circular (c) triangular (d) square

3. Use the dot grid to draw the plane shapes



Line

Line segment AB extended endlessly on both sides is called a line.

A line has no starting and no end point and it can be extended to any length in both the directions. A line, therefore has no definite length.

We denote a line in two ways.

1. Using capital letters

   We denote it as line AB or $\overleftrightarrow{AB}$.

2. Using a single small letter

   We denote it as line m.

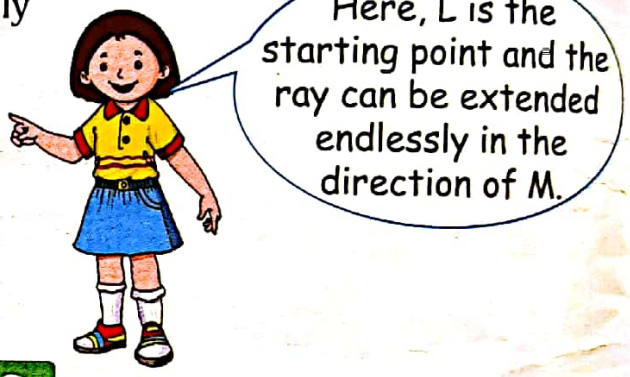
Ray

A line segment which can be extended endlessly only in one direction is called a ray.

We denote it as ray LM or $\overrightarrow{LM}$.

A ray has a starting point but no end point.

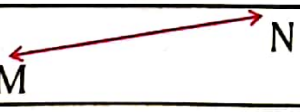
A ray, therefore, does not have a definite length.



Activity-2

Summative Assessment Based On CCE — Skills / Aspects – Concept, Written work

Complete the table :

.X	. Point X
	Line MN
	Line Segment ST
	Ray AB
	Line DE
	Ray LM
	Line Segment AB

Activity-3

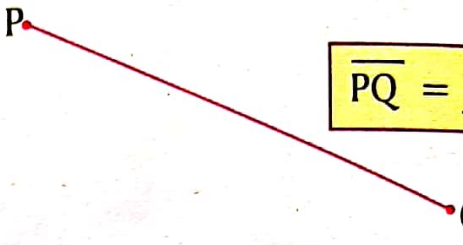
Summative Assessment Based On CCE — Skills / Aspects – Concept, Written work

1. Measure the length of line segments with the help of a ruler.

(a)

$\overline{MN}$ = 5 cm

(b)

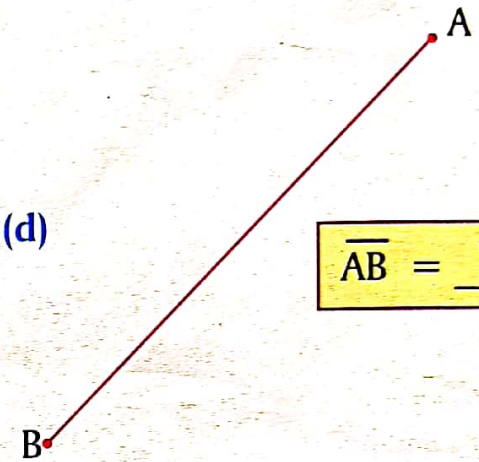


$\overline{PQ}$ = 6 cm

(c)

$\overline{XY}$ = 4 cm

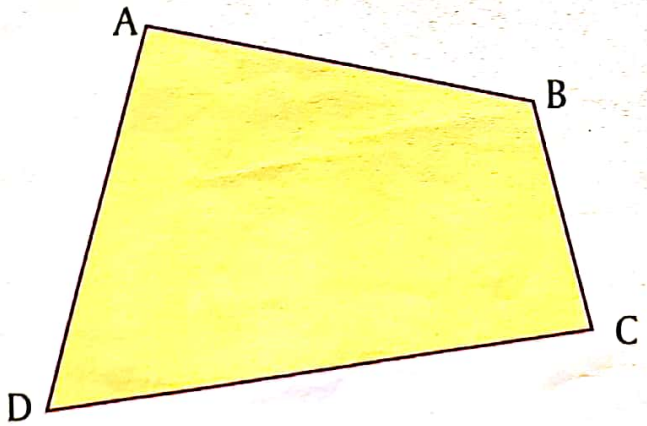
(d)



$\overline{AB}$ = 7 cm

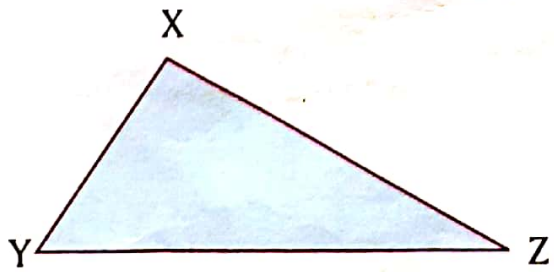
2. Measure the length of the sides of the given figures.

(a)



$\overline{AB}$ = 5 cm
$\overline{BC}$ = 3 cm
$\overline{CD}$ = 7 cm
$\overline{DA}$ = 5 cm

(b)



$\overline{XY}$ = 3 cm
$\overline{YZ}$ = 6 cm
$\overline{ZX}$ = 5 cm

3. Draw line segments of the given length in your notebook.

(a) $\overline{AB}$ = 8 cm (b) $\overline{XY}$ = 10 cm (c) $\overline{RS}$ = 7 cm

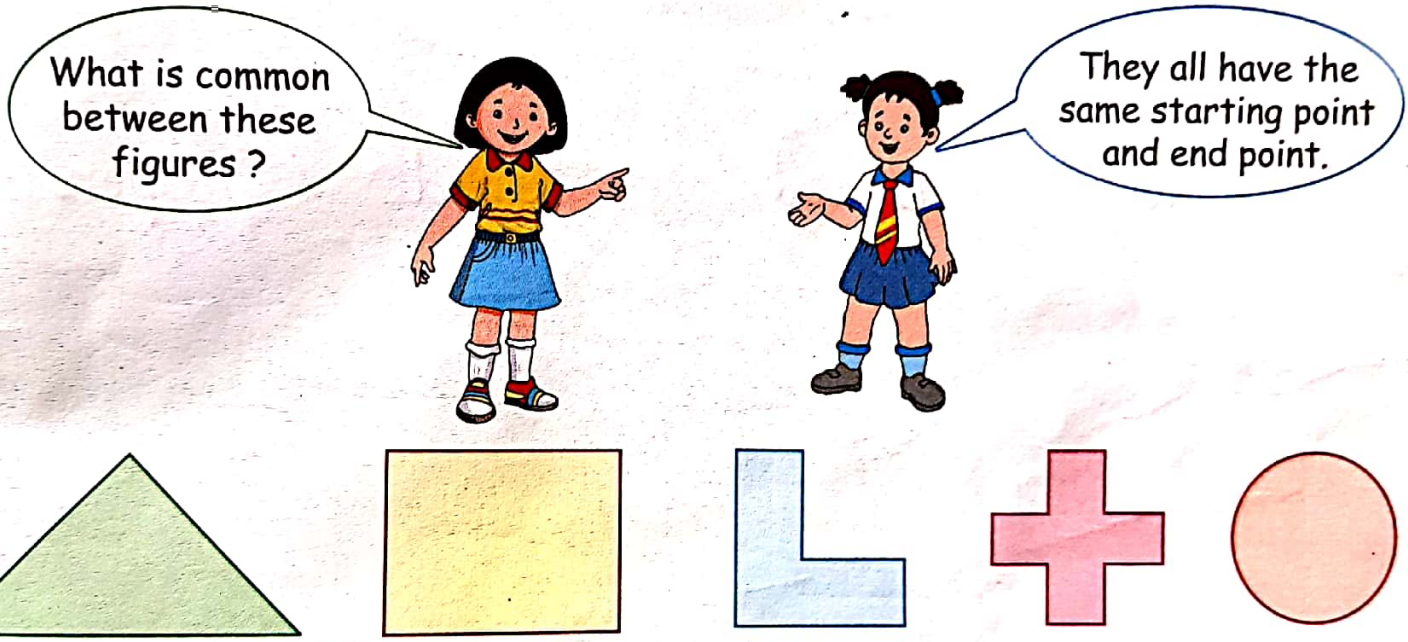
(d) $\overline{PQ}$ = 2 cm (e) $\overline{MN}$ = 9 cm (f) $\overline{CD}$ = 5 cm

Which line segment is the longest ? $\overline{XY}$ = 10cm

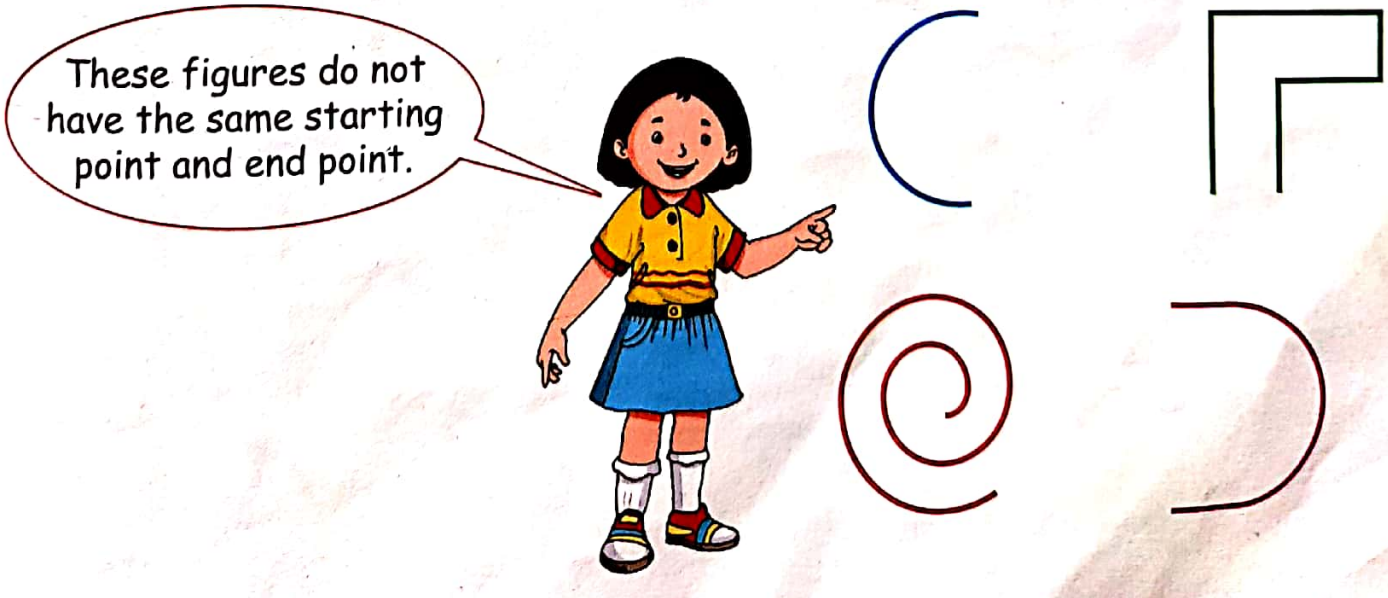
Which line segment is the shortest ? $\overline{PQ}$ = 2cm

Open and Closed Figures

Look at these figures :



These figures are called **closed figures.**



These figures are **open figures.**