

Board – CBSE

Class – 6th

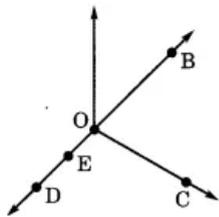
Topic – Basic Geometrical Ideas Ex:4.1

Exercise – 4.1

Q1. Use the figure to name:

- (a) Five points
- (b) A line
- (c) Four rays
- (d) Five-line segments

Sol. (a) Five points are: O, B, C, E, and D



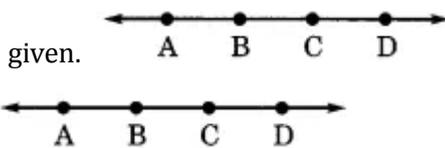
(b) Name of the line is \overleftrightarrow{DB} or \overleftrightarrow{BD} .

(c) Four rays are: \vec{OC} , \vec{OB} , \vec{OE} or \vec{OD}

(d) Five-line segments are:

$$\overline{OE}, \overline{ED}, \overline{OD}, \overline{OB} \text{ and } \overline{EB}$$

Q2. Name the line given in all possible (twelve) ways, choosing only two letters at a time from the four



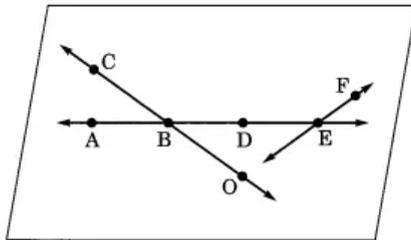
Sol. The given line can be named as follows:

- (i) \overleftrightarrow{AB}
- (ii) \overleftrightarrow{AC}
- (iii) \overleftrightarrow{AD}
- (iv) \overleftrightarrow{BC}
- (v) \overleftrightarrow{BD}
- (vi) \overleftrightarrow{CD}
- (vii) \overleftrightarrow{BA}
- (viii) \overleftrightarrow{CA}
- (ix) \overleftrightarrow{DA}
- (x) \vec{CB}
- (xi) \vec{DB}
- (xii) \vec{DC}

Q3. Use the figure to name:

- (a) Line containing point E.
- (b) Line passing through A.

- (c) Line on which 0 lies.
- (d) Two pairs of intersecting lines.



Sol.

- (a) $EF \leftrightarrow$
- (b) $AE \leftrightarrow$
- (c) $BC \leftrightarrow$ or $BO \leftrightarrow$
- (d) $CO \leftrightarrow$ or $AE \leftrightarrow$ or $AE \leftrightarrow$ or $EF \leftrightarrow$

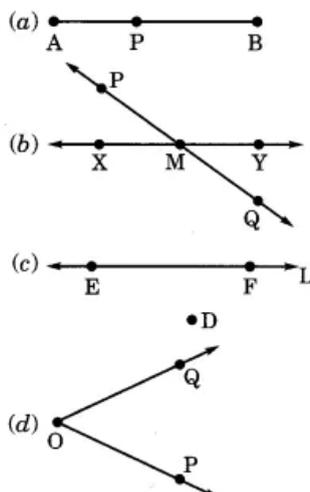
- Q3.** How many lines can pass through
- (a) one given point?
 - (b) two given points?

- Sol.**
- (a) Infinite. Many lines can pass through a given point.
 - (b) Only one line can pass through two given points.

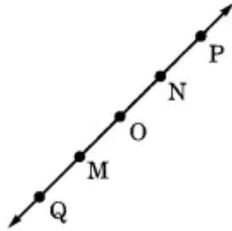
Q4. Draw a rough figure and label suitably in each of the following cases:

- (a) Point P lies on \underline{AB}
- (b) $XY \leftrightarrow$ and $PQ \leftrightarrow$ intersect at M.
- (c) Line L contains E and F but not D.
- (D) $OP \leftrightarrow$ and $OQ \leftrightarrow$ meet at O

Sol.



- Q5. Consider the following figure of line MN . Say whether the following statements are true or false in the context of the given figure.



- (a) Q, M, O, N, P are points on the line MN .
- (b) M, O, N are points on a line segment MN.
- (c) M and N are endpoints of line segment MN
- (d) O and N are endpoints of line segment OP
- (e) M is one of the endpoints of line segment QO
- (f) M is a point on ray OP.
- (g) Ray OP is different from ray QP .
- (h) Ray OP is different from ray OM .
- (i) Ray OM is not opposite to ray OP .
- (j) O is not an initial point of OP .
- (k) N is the initial point of NP and NM.

- Sol.** (a) True
(b) True
(c) True
(d) False
(e) False
(f) False
(g) True
(h) False
(i) False
(j) False
(k) True