

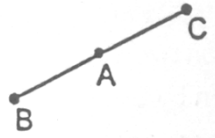
# INTRODUCTION OF EUCLIDS GEOMETRY

## AXIOMS AND POSTULATES

### EXERCISE

**Q.1** Write the largest number of points in which two distinct straight lines may intersect.

**Q.2** A, B and C are three collinear points such that point A lies between B and C. Name all the line segments determined by these points and write the relation between them.



**Q.3** State, true or false :

- (i) A point is an undefined term
- (ii) A line is a defined term.
- (iii) Two distinct lines always intersect at one point.
- (iv) Two distinct points always determine a line.
- (v) A ray can be extended infinitely on both sides of it.
- (vi) A line segment has both of its end-points fixed and so it has a definite length.

**Q.4** Name three undefined terms.

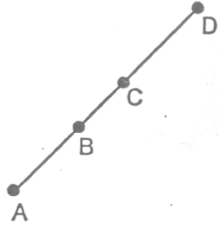
**Q.5** If AB is a line and P is a fixed point, outside AB, how many lines can be drawn through P which are :

- (i) parallel to AB
- (ii) Not parallel to AB

**Q.6** Out of the three lines AB, CD and EF, if AB is parallel to EF and CD is also parallel to EF, then what is the relation between AB and CD.

**Q.7** If A , B and C three points on a line, and B lies between A and C , then prove that :  
 $AB + BC = AC$

**Q.8** In the given figure, if  $AB = CD$  ; prove that  $AC = BD$ .



- Q.9** (i) How many lines can be drawn to pass through three given points if they are not collinear ?
- (ii) How many line segments can be drawn to pass through two given points if they are collinear

### ANSWER KEY

1. One
2. BA, AC & BC ;  $BA + AC = BC$
3. (i) True (ii) False  
 (iii) False (iv) True  
 (v) False (vi) True
4. Point, line and plane
5. (i) Only one (ii) Infinite
6.  $AB \parallel CD$
9. (i) Three lines (ii) one