Geometry Terms

Geometry: The study of the properties and relationships of points, lines, planes, and solids.

I. **Undefined terms:** _____

_____

A. **Point:** Has no _____, _____, or _____. It merely indicates a _____.

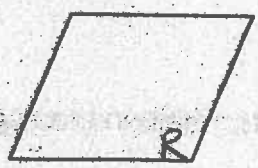
B. **Line:** An infinite set of _____ that extends endlessly in both directions.

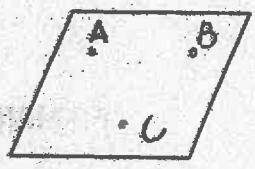
Curved Line

Straight Line: This is what line will mean unless otherwise stated.

Symbolism:

C. **Plane:** A set of points that extends _____ across a _____ in all directions.





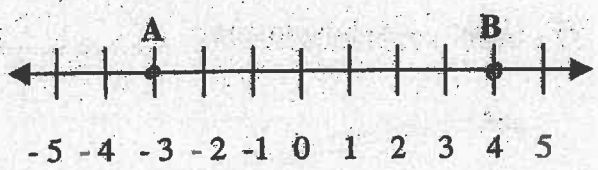
II. **Definitions:** _____

A. **Collinear Set of Points:** Set of points, all of which lie on the same _____.

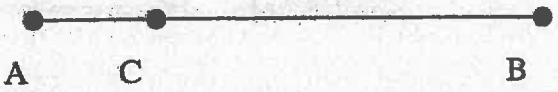
A B C

B. **Non-Collinear Set of Points:** Set of _____ point that do not lie on the same _____.

C. **Distance between any two points on the real number line:** the absolute value of the difference of the coordinates of two points.



D. **Line Segment:** Part of a line consisting of 2 _____ and the _____.

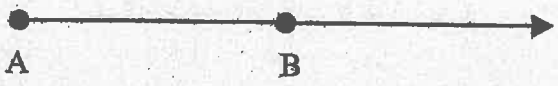


E. **Congruent Segments:** Segments that have _____.

F. **Midpoint:** Point on the segment that _____ it into _____ _____.

G. **Bisector:** A line or subset of a line that intersects a segment at its _____

H. **Ray:** Part of a line consisting of _____ and all the points on _____ of the endpoint.



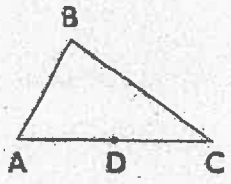
I. **Opposite Rays:** Two rays of the _____ with a common _____ and no other _____ in common.

J. **Betweenness of Points on a Line:** *B* is between *A* and *C* if *A*, *B*, and *C* are distinct collinear points and $AB + BC = AC$

Examples:

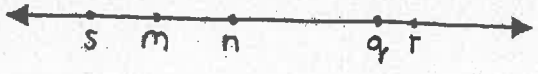
1. Find the distance between the points whose coordinates on the real number line are −4 and 3

2. In the figure, *A*, *B*, and *C* are the vertices of a triangle, and *D* is a point on $\overline{AC}$.



a. Name three collinear points.
b. Name three noncollinear points.
c. Which point is between *A* and *C*?
d. If *D* is the midpoint of $\overline{AC}$, name two congruent segments in the figure.

3. Use the figure shown:



a. Name a point between *s* and *n*.

b. Name a point between *s* and *q* and also between *m* and *r*.

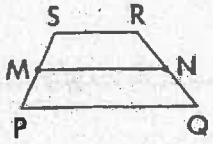
c. Name two rays, each of which has point *m* as an endpoint.

4. Find the required distance if A, B, and C are collinear points and point B is between A and C.

a. AB = 5, BC = 7, AC = ?

b. AB = 3, AC = 18, BC = ?

5.



$\overline{MN}$ bisects $\overline{RQ}$

1. _____

2. _____

6. Use the figure in #5 to complete the following statements.

a. SP − SM = _____ b. RN + NQ = _____

c. RQ − NQ = _____