# **Points and Segments**

## **Understanding Points and Segments**

- A point shows an exact position or location in space.
- It has no length, width, or thickness it is just a tiny dot.
- Points are usually named with capital letters like A, B, C.
- A line segment is a straight path between two points.
- It has a fixed length and two endpoints.
- A segment is a part of a line and does not go on forever.

#### Vertex is a point.



#### Line segment

A segment is a straight path between two points. It is the shortest distance between two points.



### **Key Points to Remember**

- A point marks a location
- A segment has two endpoints
- A line goes on in both directions, but a segment does not
- We name a segment using its two endpoints (e.g., segment AB)
- Many shapes are made of line segments

### **Mixed Examples with Solutions**

**Example:** Name the points in the diagram

Solution: If a diagram has dots labeled A, B, and C,

then A, B, and C are points



Example: How many endpoints does a segment have?

Solution: A segment has 2 endpoints

Example: Draw a segment and name it

Solution: Draw a straight line between two points and label them P and Q  $\rightarrow$ 

P Q

Example: Is a segment part of a line?

Solution: Yes, a segment is a part of a line that has fixed ends

Example: Which of these is a segment: a ray, a point, or AB (with both ends marked)?

Solution: AB with both ends marked is a line segment

### **Summary Points**

segment PQ

- A point shows a position and is marked by a dot.
- A line segment connects two points with a straight path.
- A segment has two endpoints and a fixed length.
- We name segments using the letters of their endpoints.
- Points and segments form the base of all geometric shapes.