

# Coordinate Geometry

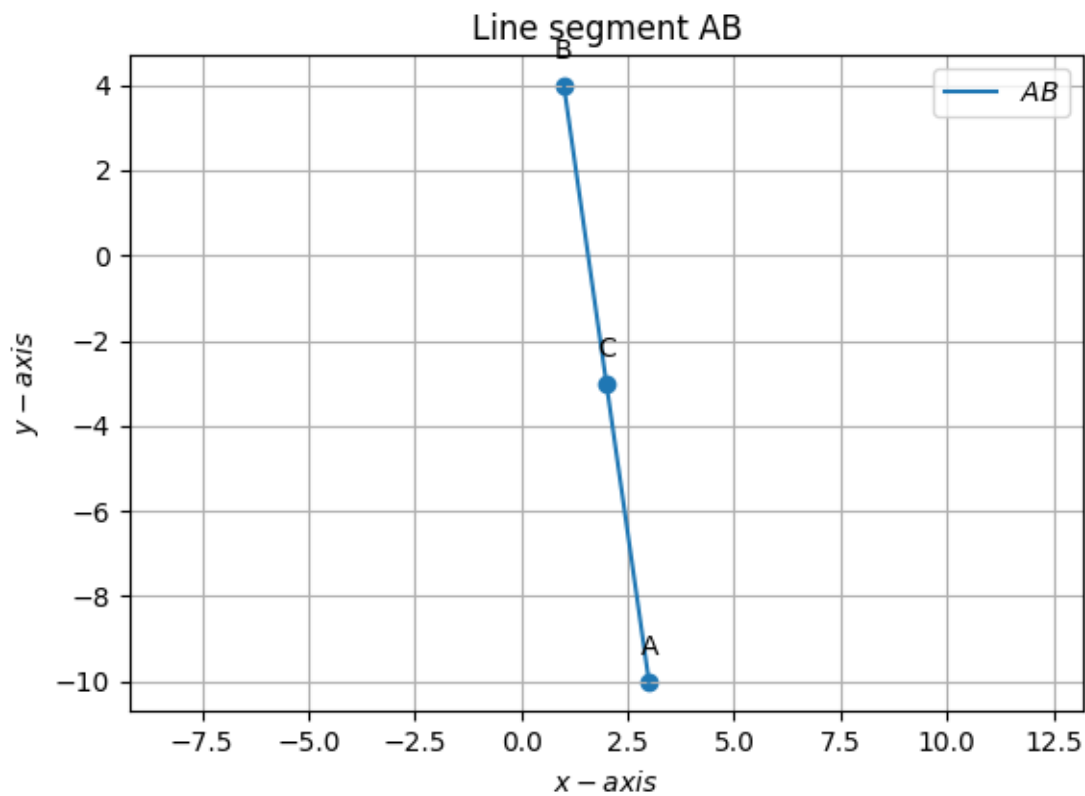
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## **Class 10<sup>th</sup> Maths - Chapter 7**

This is Problem-7 from Exercise 7.4

1. Find the coordinates of a point A, where AB is the diameter of a circle whose centre is (2, -3) and B is (1, 4).



**Solution:** :  $c = \frac{mB+nA}{m+n}$   
 $Cm + Cn = mB + nA$   
 $\frac{Cm+Cn-mB}{n} = A$

$$\mathbf{c} = \begin{pmatrix} 2 \\ -3 \end{pmatrix} \quad (1)$$

$$\mathbf{b} = \begin{pmatrix} 1 \\ 4 \end{pmatrix} \quad (2)$$

$$(3)$$

By taking  $m=1$  and  $n=1$

*so,*

(4)

$$\frac{\begin{pmatrix} 2 \\ -3 \end{pmatrix} + \begin{pmatrix} 2 \\ -3 \end{pmatrix} - \begin{pmatrix} 1 \\ 4 \end{pmatrix}}{1}$$

(5)

By adding the x,

$$2+2-1=3$$

By adding the y,

$$-3-3-4=-10$$

hence, the coordinates are (3,-10)