

Q.2. Find the distance between the points.

Ans. (i) The given points are A(8,1) and B(1,10).  
Then,  $(x_1, y_1) = (8, 1)$  and  $(x_2, y_2) = (1, 10)$   
 $\therefore AB = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$   
 $= \sqrt{(1 - 8)^2 + (10 - 1)^2}$   
 $= \sqrt{49 + 81}$   
 $= \sqrt{130} = 11.40175$

(ii) The given points are A(7, -4) and B(-3, 1).  
Then,  $(x_1, y_1) = (7, -4)$  and  $(x_2, y_2) = (-3, 1)$   
 $\therefore AB = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$   
 $= \sqrt{(-3 - 7)^2 + (1 - (-4))^2}$   
 $= \sqrt{100 + 25} = 11.18034$

(iii) The given points are A(-6, -1) and B(5, -12).  
Then,  $(x_1, y_1) = (-6, -1)$  and  $(x_2, y_2) = (5, -12)$   
 $\therefore AB = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$   
 $= \sqrt{11^2 + 11^2} = 15.55635$

(iv) The given points are A(1, -4) and B(4, -6).  
Then,  $(x_1, y_1) = (1, -4)$  and  $(x_2, y_2) = (4, -6)$   
 $\therefore AB = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$

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