

Q.2. As Node A can hear the beacons located at (4,2) and (2,5) and Node B can hear beacons located at (2,5) and (3,7) we can find the distance b/w beacon points and the given position for the sensors. As the range is 2m the distance should be less than equal to 2m.

- for position (3, 3.5) for Node A.

a) the distance from (4,2) is

$$\begin{aligned} d &= \sqrt{(4-3)^2 + (2-3.5)^2} \\ &= \sqrt{1 + (-1.5)^2} \\ &= \sqrt{3.25} \\ &= 1.803 \end{aligned}$$

b) the distance from (2,5) is

$$\begin{aligned} d &= \sqrt{(2-3)^2 + (5-3.5)^2} \\ &= \sqrt{(-1)^2 + (1.5)^2} \\ &= \sqrt{1 + 2.25} \\ &= 1.803 \end{aligned}$$