

COE 549 Quiz #2

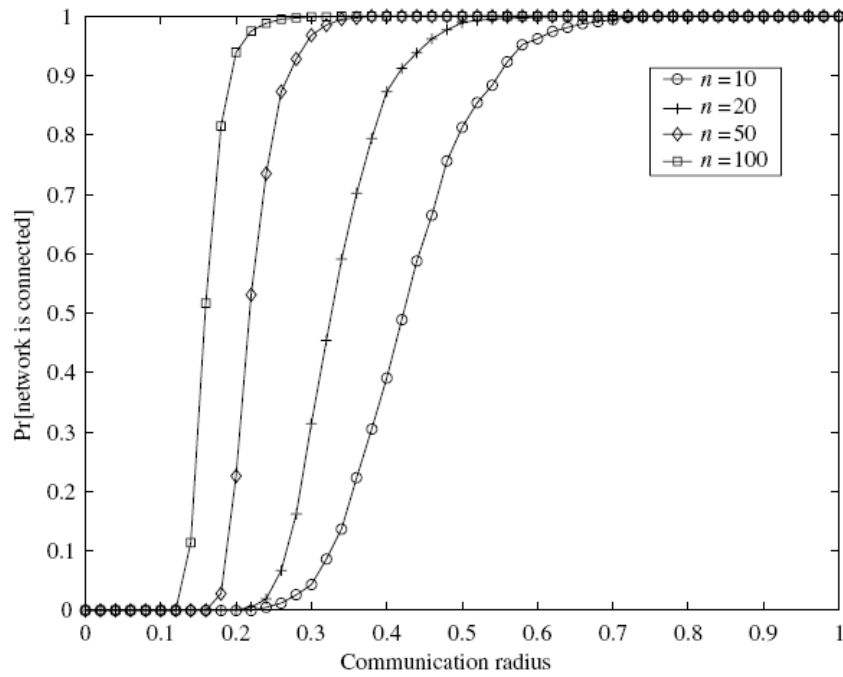
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Name:

Number:

1. Does the below figure conform with the critical transmission range of connectivity?

$O\left(\sqrt{\frac{\log n}{n}}\right)$. Comment on your answer.



2. Consider the square region from $(0, 0)$ to $(1, 1)$ with 100 sensor nodes again located on the grid at coordinate points $(m/10, n/10)$. Assume all nodes have the same sensing range R_s . What should R_s be in order to ensure that the area is K -covered, for $k=1,2,4$? For these cases, give a setting of the communication range R_c that will also ensure K -connectivity.

