

Question 1

Sometimes agents need to agree on different opinions. This is called consensus modelling in swarm systems. We are going to evaluate the *voter model* against the *majority rule* in terms of consensus performance:

- a. Given a network of 5 agents of 2 possible states s describe by the tuple $(x, y, s = \{0,1\})$ for each agent.

$(3, 0, s = 0), (3, 4, s = 1), (5, 1, s = 1), (2, 4, s = 0)$ and $(4, 2, s = 1)$

What are the main parameters to consider and how would you assess performance when comparing these two models?

- b. Simulate the general case when there are N agents of O opinions. How does the two models compare?