Random selection challenge

Consider three random processes in which a node is selected:

1. **uniformly at random** from all nodes,
2. as a **random endpoint of** a randomly selected **link**,
3. as a **random neighbor of** a randomly selected **node**.

What is the **probability of selecting node** i in each of the three cases? (*State the probabilities in terms of n, m and $\{k\}$ and explain your reasoning.*) Reason separately for the following three scenarios:

- large **online social network**,
- **Erdős-Rényi model** graphs,
- **configuration model** graphs.