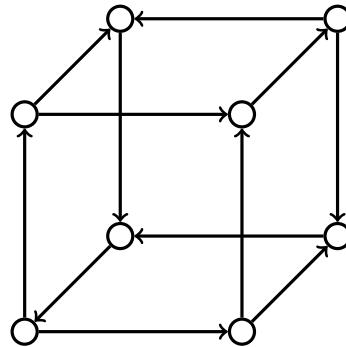
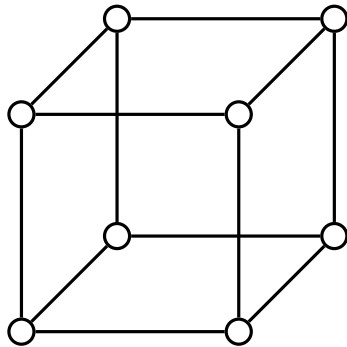


Let $G = (V, E)$ be an undirected graph. A k -orientation assigns each edge a direction such that every vertex of G has *at most* k incoming edges. Describe an $O(m^3 \log n)$ algorithm to find the smallest k for which G has a k -orientation.

For example, the cube graph should return 2, as shown below.



Rubric.

- This task will form part of the portfolio.
- Ensure that your argument is clear and keep reworking your solutions until your lab demonstrator is happy with your work.