Concepts & Notation

- Sec. 1.2: subgraph.

- Sec. 1.2.1: walk, trail, path, length, closed walk, cycle, connected, disconnected, component.

- Sec. 1.2.2: spanning subgraph, complete graph $K_n$, cycle graph $C_n$, path graph $P_n$, bipartite graph, Hamiltonian, Bipartite Graph Characterization Theorem, complete bipartite graph $K_{n,m}$, star graph $K_{1,n}$.

The level sets of vertex $v$ are $L_i(v) = \{w : d(v, w) = i\}$.

1. Find the level sets for vertex 0 for the Cube graph: $L_0(0), L_1(0), L_2(0), \ldots$.

2. Use these level sets to construct a bipartition $X, Y$ of the cube graph.
3. Use your sets $X, Y$ to redraw the cube graph so that it is clearly bipartite.