1. Any connected graph with $n$ nodes and $n$ edges has exactly one cycle.

2. Any $n$-node binary tree can be transformed into any other $n$-node binary tree by a sequence of at most $2n - 2$ rotations.

3. If $d_1, \ldots, d_n$ are positive integers such that $\sum_{i=1}^{n} d_i = 2n - 2$, then there is a tree having $d_1, \ldots, d_n$ as its vertex degrees. For examples, $\{1, 1, 1, 1, 1, 5\}$ has sum $2 \cdot 6 - 2$, and so the hypothesis is satisfied. The tree that is the star with five leaves has vertex degrees $\{1, 1, 1, 1, 1, 5\}$. Also, $\{1, 1, 1, 1, 2, 3, 3\}$ has sum $2 \cdot 7 - 2$, and the perfect binary three with depth 2 has vertex degrees $\{1, 1, 1, 1, 2, 3, 3\}$.