Section 1.3.1

3 A tree has no cycles, so has no odd cycles and thus is a bipartite graph by Theorem 1.3.

4 Suppose that $K_{r,s}$ is a tree, and to show a contradiction assume it is not a star. Then $r > 1$ and $s > 1$ and let $x, x' \in X, y, y' \in Y$ from the bipartite set X and Y. $xy, xy', x'y, x'y' \in E(K_{r,s})$ so x, y, x', y', x is a cycle, contradicting the assumption that $K_{r,s}$ is a tree.