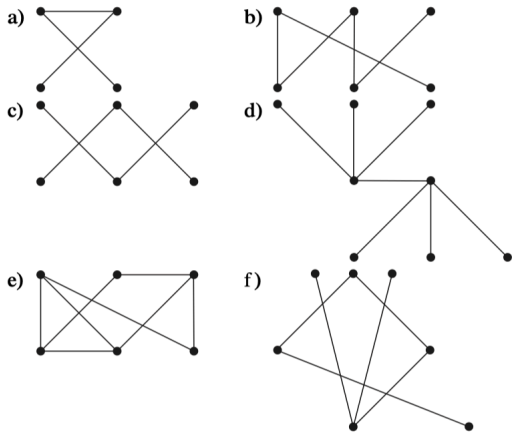
Exercise Sheet 15

Discrete Mathematics, 2020.11.17

1. ([R], Page 755, Exercise 2(a)(b)(c)(d)(e)(f)) Which of these graphs are trees?



2. Suppose $G = (V, E)$ is an undirected graph with $|V| = n \geq 1$ and $|E| = n - 1$. Prove that if G is connected, then G is a tree.

3. Suppose $G = (V, E)$ is an undirected graph with $|V| = n \geq 1$ and $|E| = n - 1$. Prove that if G has no simple circuit, then G is a tree.