

**Trees**

A connected graph with no cycle is called a **tree**.

**Problem 102** Find all trees (distinct up to isomorphism) with fewer than 7 vertices.

**Problem 103** Find all trees with 7 vertices.

**Problem 104** Find all trees with 8 vertices.

**Problem 105**  $G$  is a tree if and only if every two vertices of  $G$  are joined by a unique path.

**Problem 106**  $G$  is a tree if and only if  $G$  is connected and  $p = q + 1$ .

**Problem 107**  $G$  is a tree if and only if  $G$  has no cycles and  $p = q + 1$ .

**Problem 108** Which trees are bipartite graphs?

**Problem 109**  $G$  is a tree if and only if every edge of  $G$  is a bridge.

