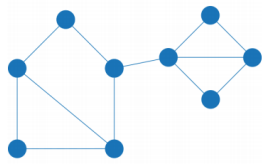
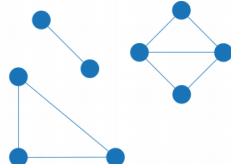


1 Assignment

Recall that a graph is *connected* if, for every two vertices, there is a path along edges from one to the other.



Connected Graph



Disconnected Graph
Includes 3 components.

Prove the following theorem.

Theorem 1. *Let G be a graph with v vertices and e edges. If $e < v - 1$, then G is not connected.*