

To Connect, or Not to Connect?

1 min

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have varying degrees of connection. The higher the ratio of edges to vertices, the more connected the graph.

This graph represents a social network; people are vertices and edges are friendships. Ted is *adjacent* to Patty, Ron, and Alice because an edge **directly** connects them.

We use a single line for an edge, but these friendships are **bi-directional**. Patty is friends with Ron and Ron is friends with Patty.

A *path* is vertices which are connected by any number of intermediate edges. The paths from Alice to Patty could go Alice to Ted to Patty **or**, Alice to Ted to Ron to Patty.

No path exists between Sally and Ted. When no path exists between two vertices, a graph is *disconnected*.

Instructions

What are the paths that connect Ron to Ted?

What edge could we add that would change this into a connected graph?

Disconnected Graph

