Test Problem2

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In a mathematicians terminology, a graph is a collection of points and lines connecting some (possibly empty) subset of them. The points of a graph are most commonly known as graph vertices, but may also be called nodes or simply points. Similarly, the lines connecting the vertices of a graph are most commonly known as graph edges, but may also be called arcs or lines.

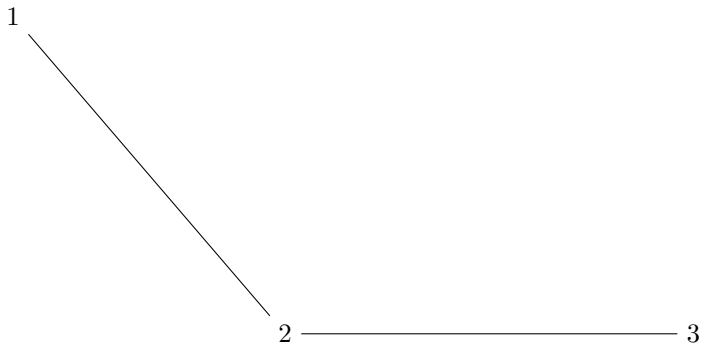

Figure 1: Simple graph with three nodes

The study of graphs is known as graph theory, and was first systematically investigated by D. Knig in the 1930s (Gardner 1984, p. 91). Unfortunately, as Gardner (1984, p. 91) notes, The confusion of this term [i.e., the term graph to describe a network of vertices and edges] with the graphs of analytic geometry [i.e., plots of functions] is regrettable, but the term has stuck. Some educators use the term vertex-edge graph for a connected set of nodes in an attempt to preserve the common usage of graph to mean the plot of a function.

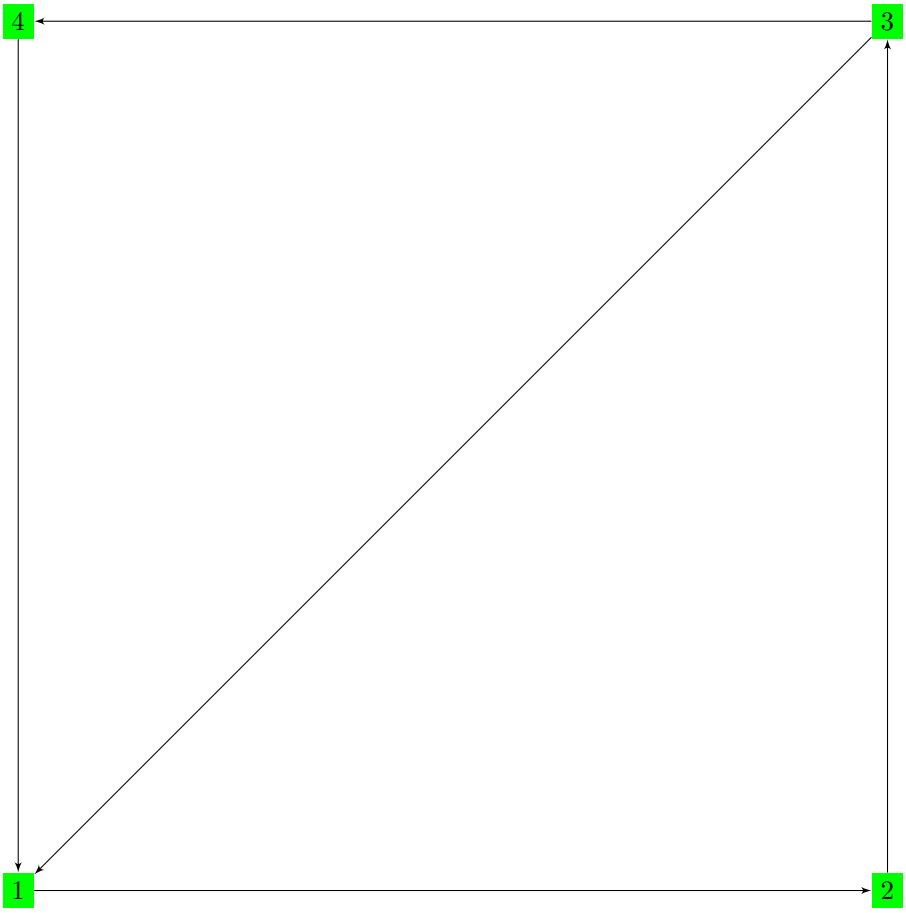

Figure 2: Directed graph with four nodes

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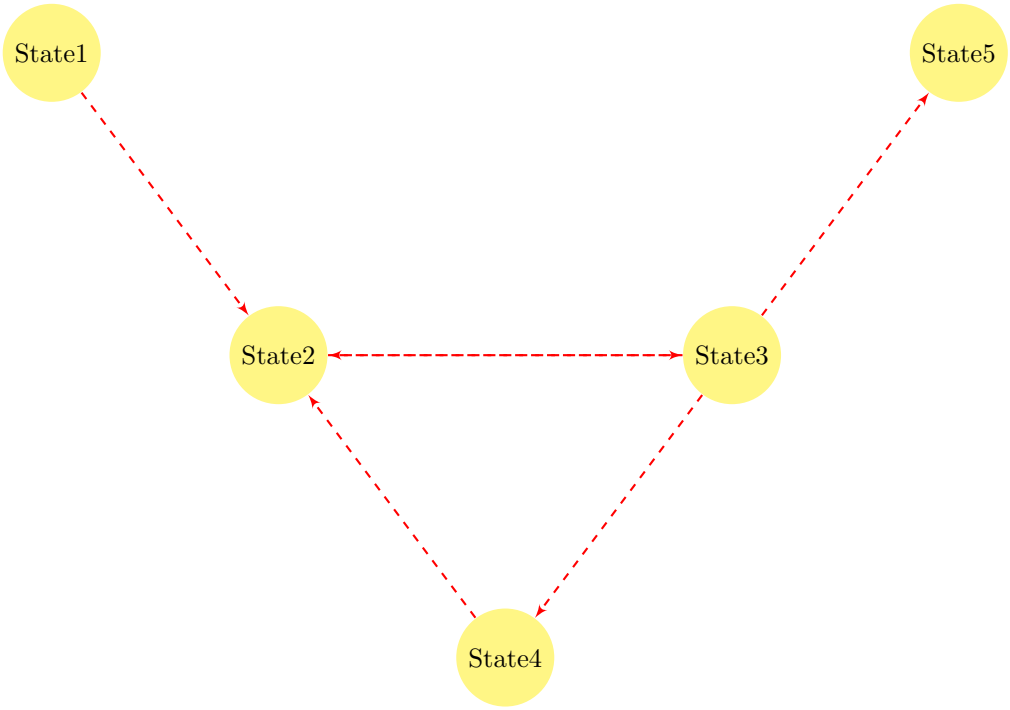

Figure 3: Directed graph with 5 nodes

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