taining more than a few vertices and edges. A related task is c
with different specifications are *structurally equivalent*, that is,
ame pattern of connections. Designing a practical algorithm t
a famous unsolved problem, called the *graph-isomorphism pro*

ally Equivalent Graphs

ne shape or length of an edge and its position in space are not par
on, and neither are edge-crossings or other artifacts of a drawin
ely many spatial representations and drawings.

2.1.1: The two line drawings in Figure 2.1.1 both depict the sa

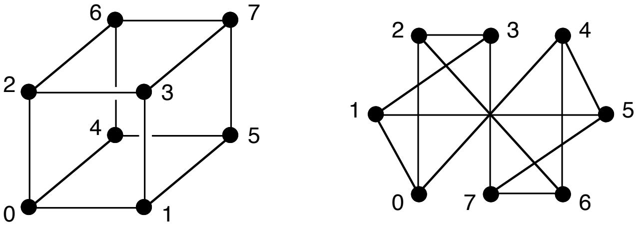

Figure 2.1.1 Two different drawings of the same grap

rtices and edges of the two drawings have matched labels, and t
vertices and twelve edges. It is easy to verify for every pair $\{i,$
are adjacent in one graph if and only if they are adjacent in t
therefore, that these two drawings both represent the same grap

raphs are unlabeled, or if the vertices of one drawing are labeled di
s of another, there are circumstances under which the graphs ar
s virtually the same.

2.1.2: The names of the vertices and edges of graphs G and H i
these two graphs are strikingly similar.

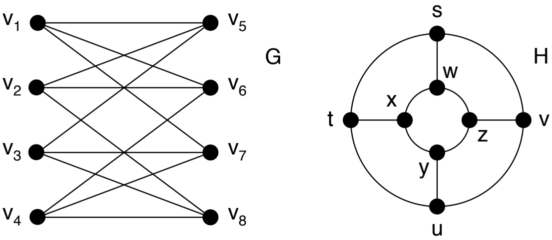

Figure 2.1.2 Two drawings of essentially the same grap