(a)

(b)

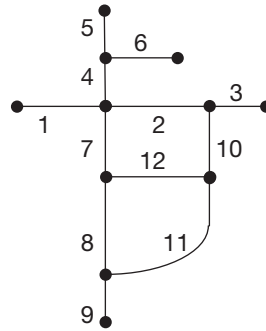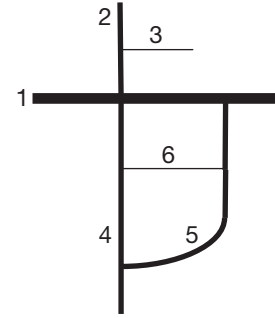**(c)**

5.8 • Layout plan, network graph and route structure. (a) Layout plan. (b) Graph of 12 links. (c) Route structure comprising 6 routes.

BOX 5. ROUTES AND JOINTS

1. A route comprises a link or a linear aggregation of conjoined links.
2. A joint is a node with one, and only one, conjoined route passing through it.

Each joint in a structure *reduces by one* the number of routes relative to the number of links. Hence: Routes = Links – Joints. See Appendix 5 for more elaboration on these conventions.
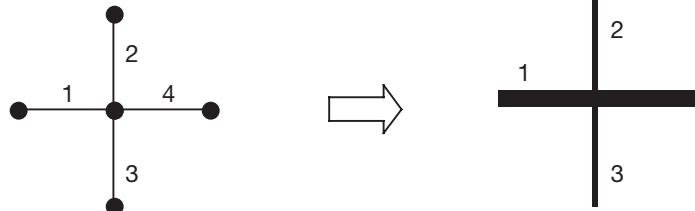
Alternative representations

The joining up of links to form routes implies a choice as to which links become through routes. This choice will affect the structural character of the resulting representation. There is no single 'correct' route structural representation of a given graph of nodes and links, nor automatic correspondence between the set of nodes and links and the set of routes formed from it. The fact that the graph representation in Figure 5.3(c) could represent either a 'high street' (Figure 5.3(a)) or a tributary (Figure 5.3(b)) demonstrates that the route structural interpretation must add something (or retain something from the original plan) not present in the bare graph.