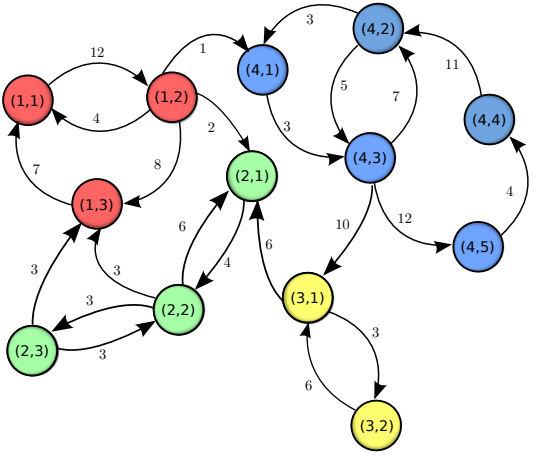

(a) A weighted hierarchical graph with 13 vertices and dimension $n = 2$. Different colours are used to distinguish clusters.

(b) Vertex ordering

$(1) = (1,1)$
$(2) = (1,2)$
$(3) = (1,3)$
$(4) = (2,1)$
$(5) = (2,2)$
$(6) = (2,3)$
$(7) = (3,1)$
$(8) = (3,2)$
$(9) = (4,1)$
$(10) = (4,2)$
$(11) = (4,3)$
$(12) = (4,4)$
$(13) = (4,5)$

(c) Weighted block adjacency matrix corresponding to the hierarchical graph in (a).

$$\left[\begin{array}{ccc:ccc:ccc:ccc:ccc}
0 & 12 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
4 & 0 & 8 & 2 & 0 & 0 & 0 & 0 & 1 & 0 & 0 & 0 & 0 \\
7 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
\hdashline
0 & 0 & 0 & 0 & 4 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 3 & 6 & 0 & 3 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 3 & 0 & 3 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
\hdashline
0 & 0 & 0 & 6 & 0 & 0 & 0 & 3 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 6 & 0 & 0 & 0 & 0 & 0 & 0 \\
\hdashline
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 3 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 3 & 0 & 5 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 10 & 0 & 0 & 7 & 0 & 0 & 12 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 11 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 4 & 0
\end{array}\right]$$