

Distributed Algorithms 2020

7a Covering maps

First part:

- *positive results*, algorithms
- what can be computed (efficiently)?

First part:

- *positive results*, algorithms
- what can be computed (efficiently)?

Second part:

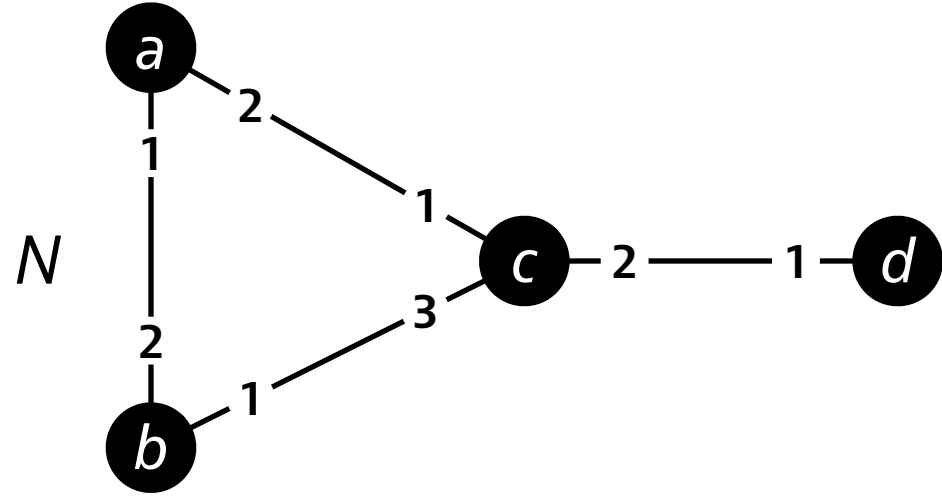
- *negative results*, lower bounds
- what cannot be computed (efficiently)?

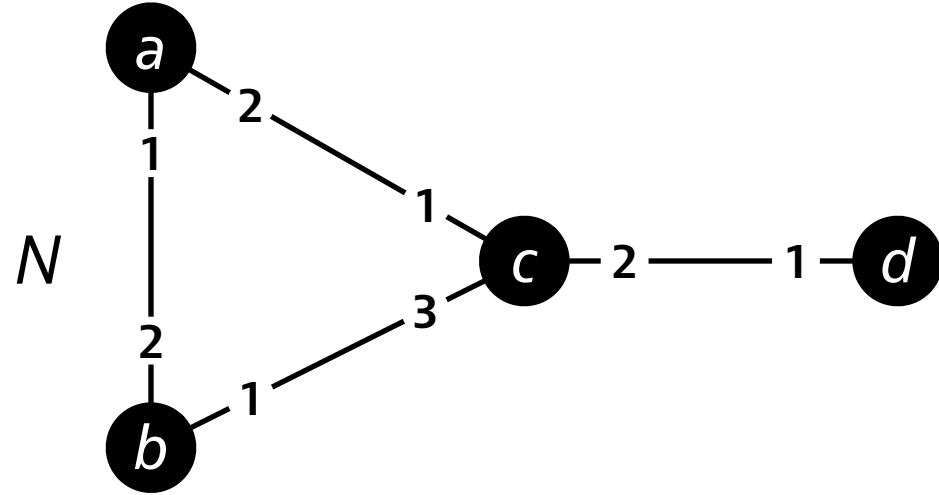
Today:

- port-numbering model

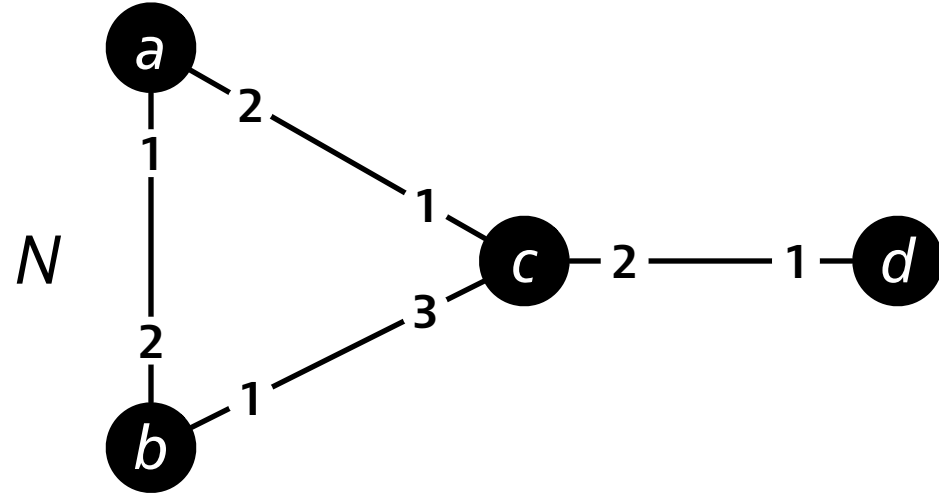
Today:

- port-numbering model
- covering maps



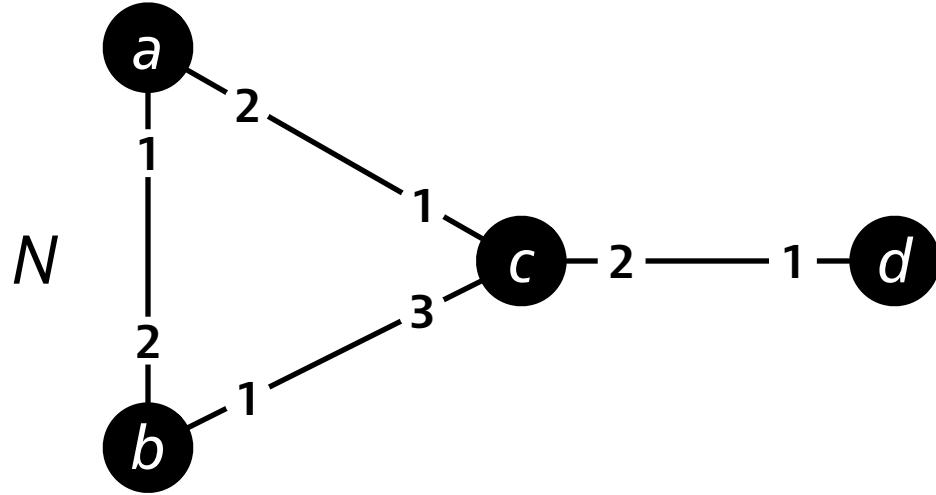


Algorithm A



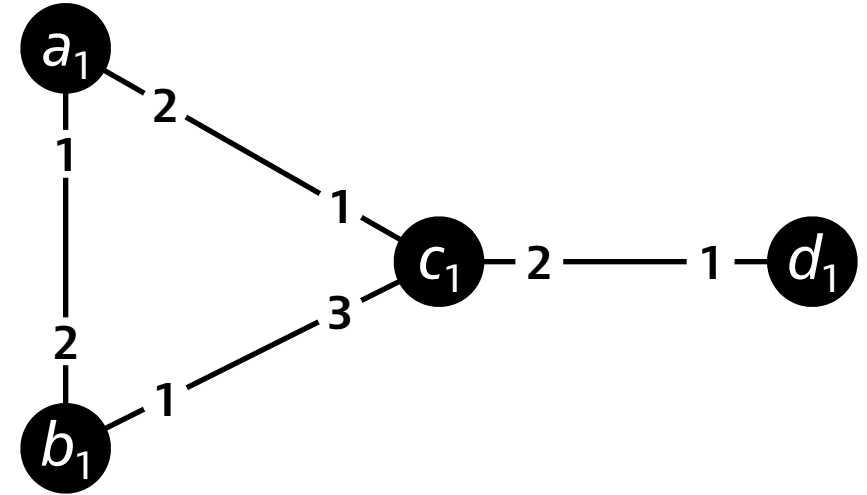
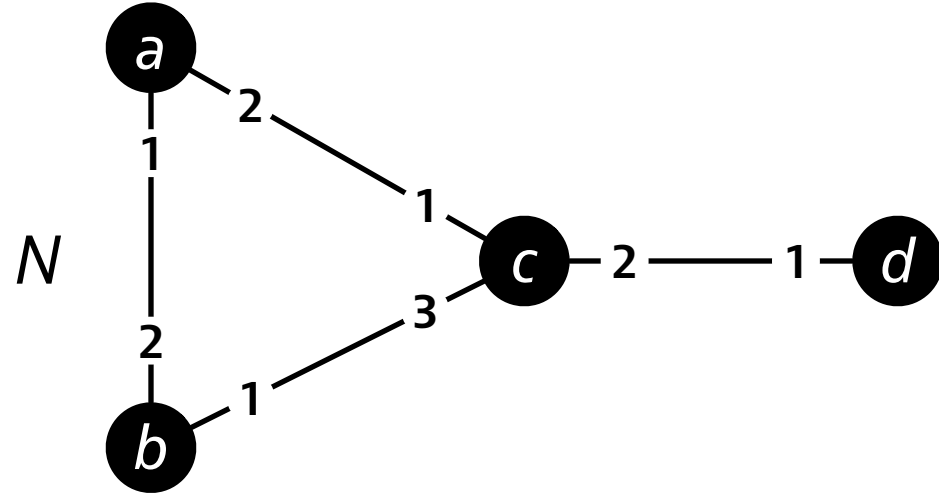
Algorithm A

init
send
receive

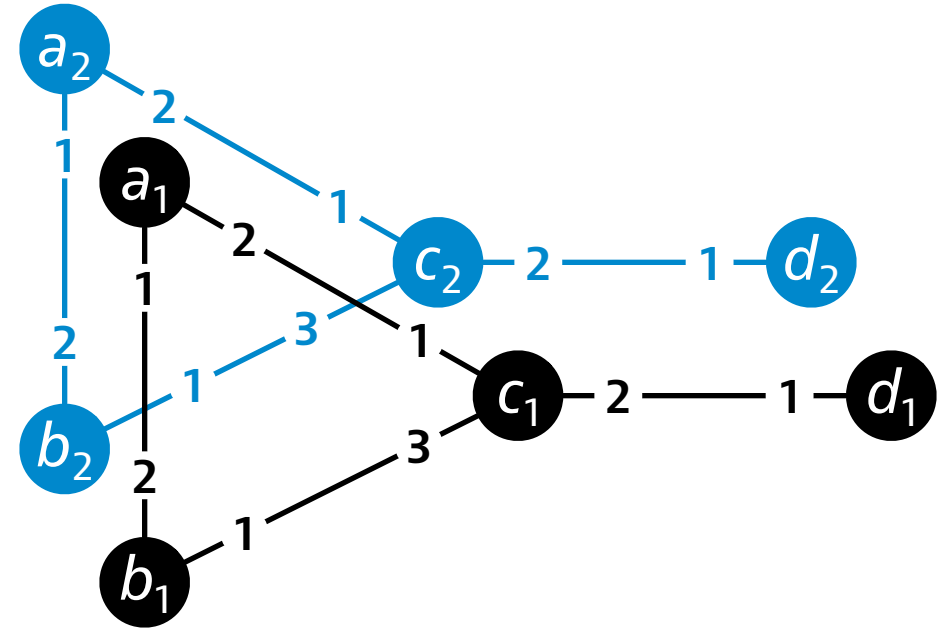
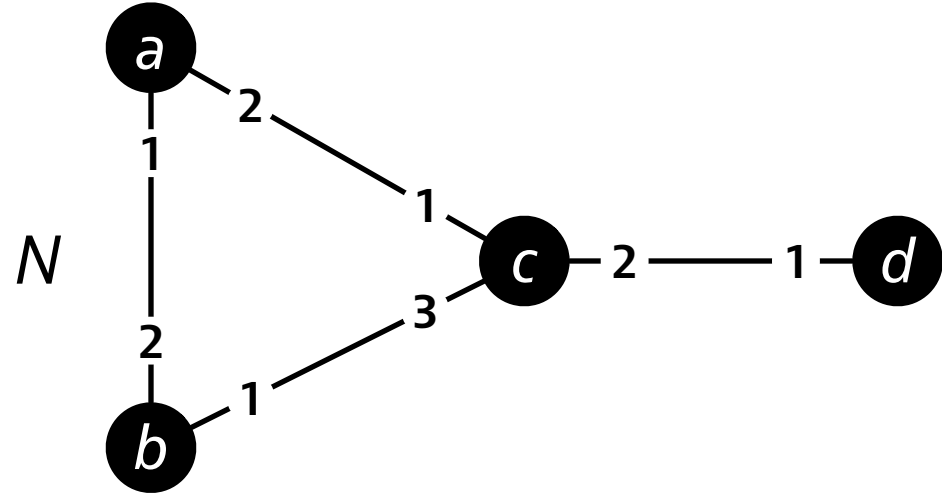


Algorithm A

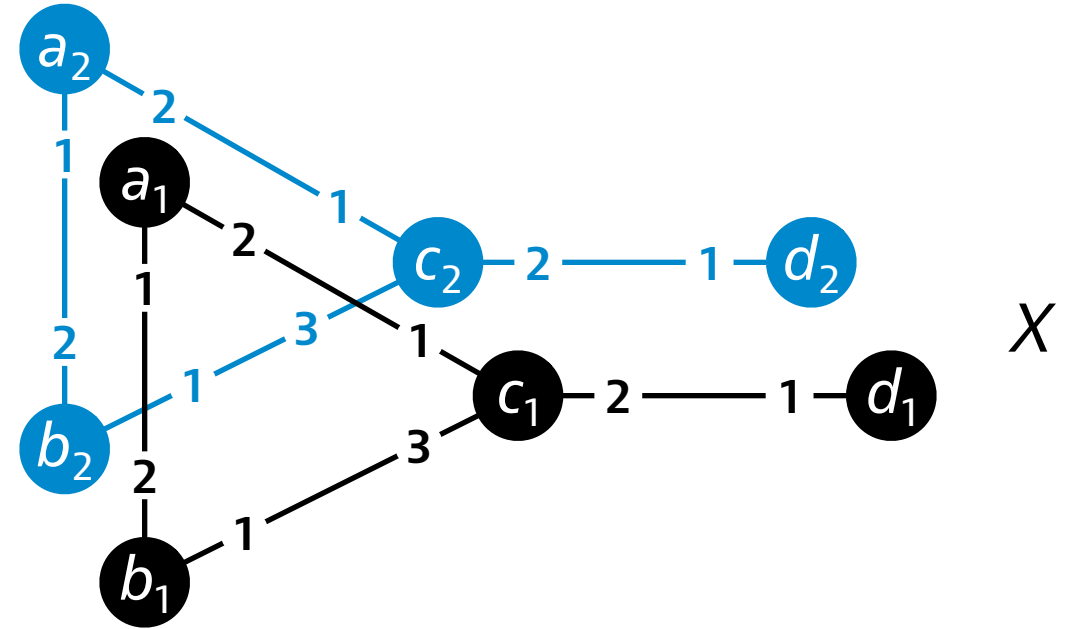
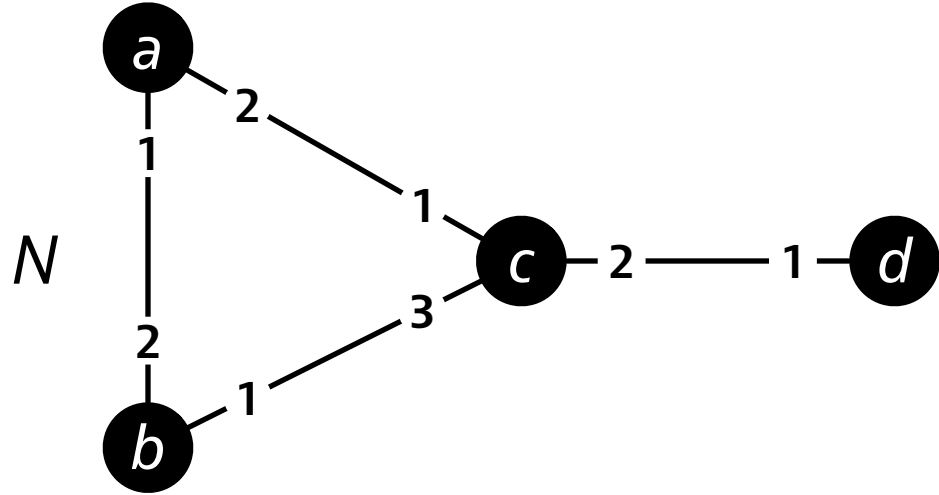
algorithm A + network N
 \rightarrow *execution* of A in N



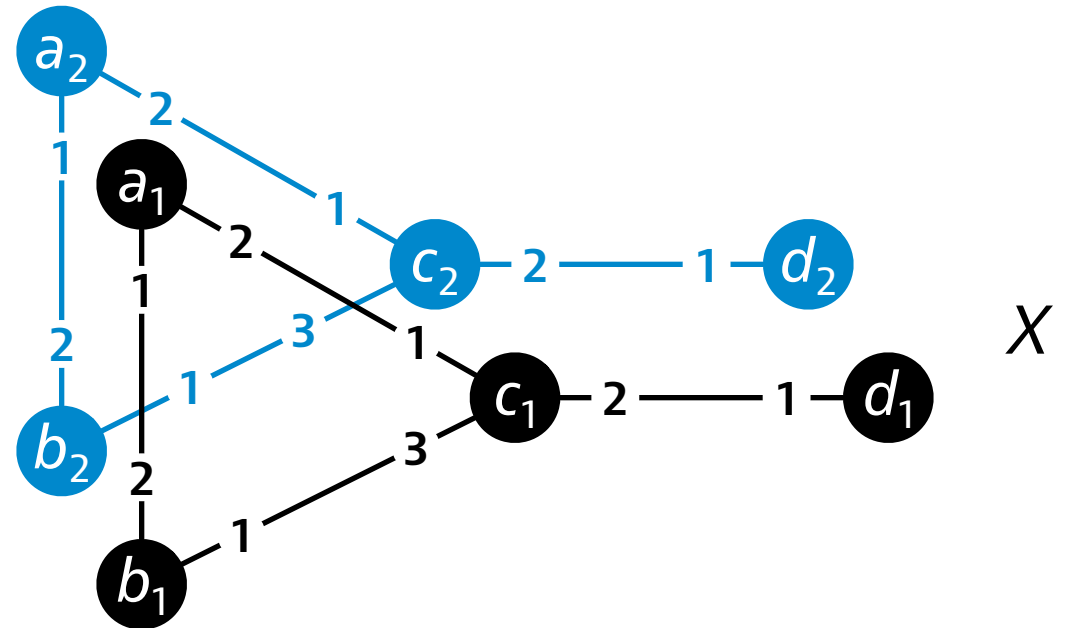
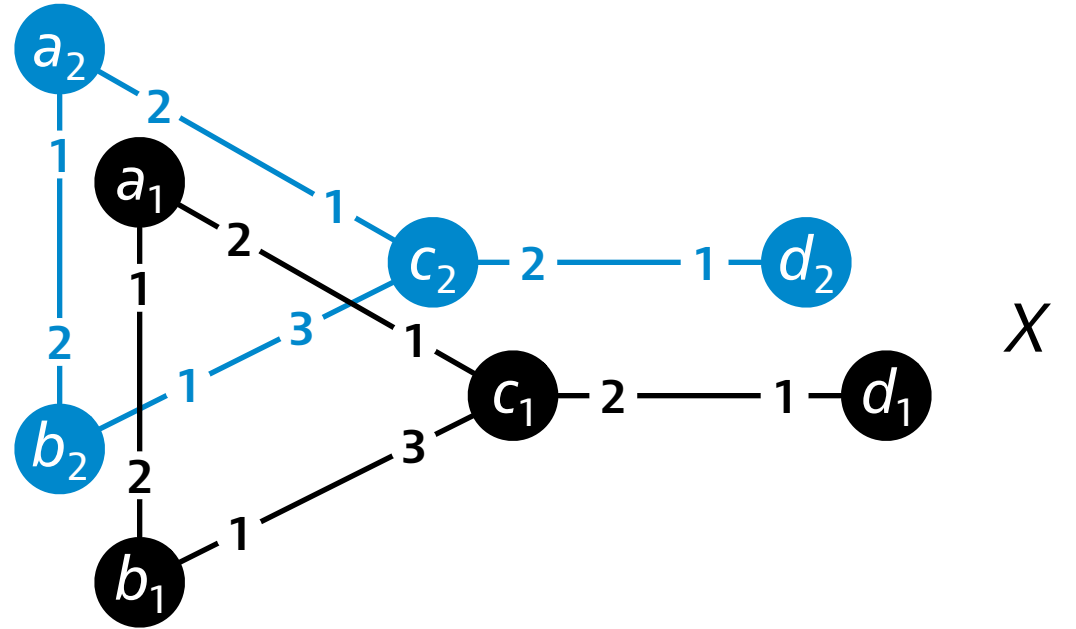
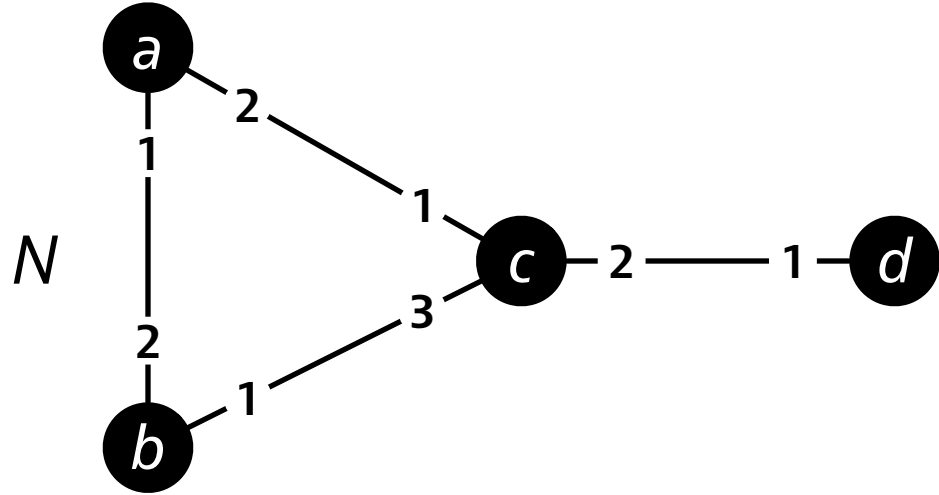
Algorithm A



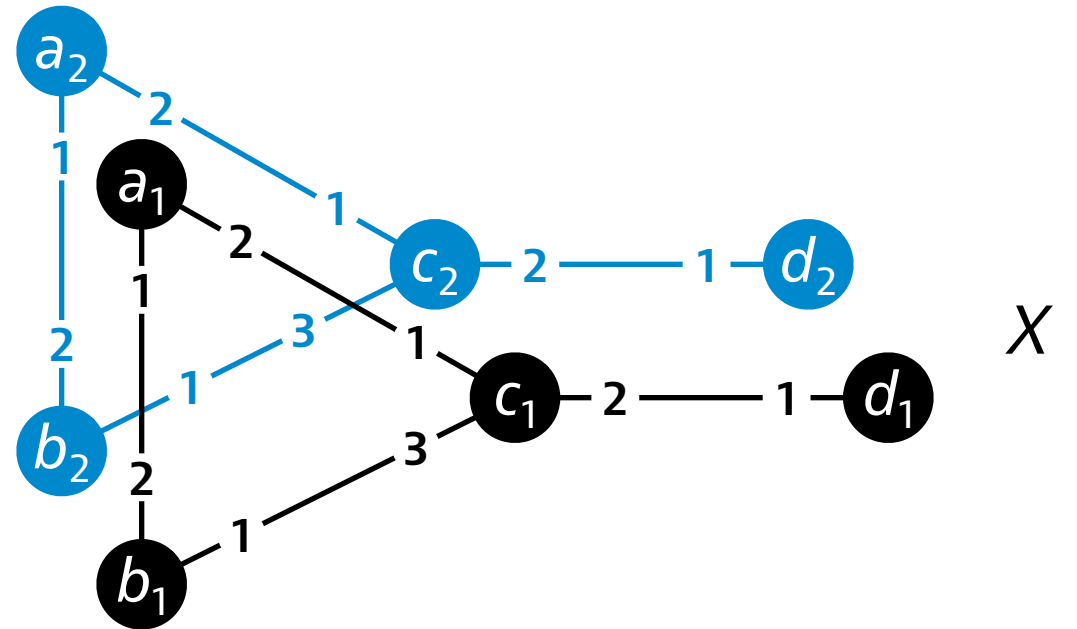
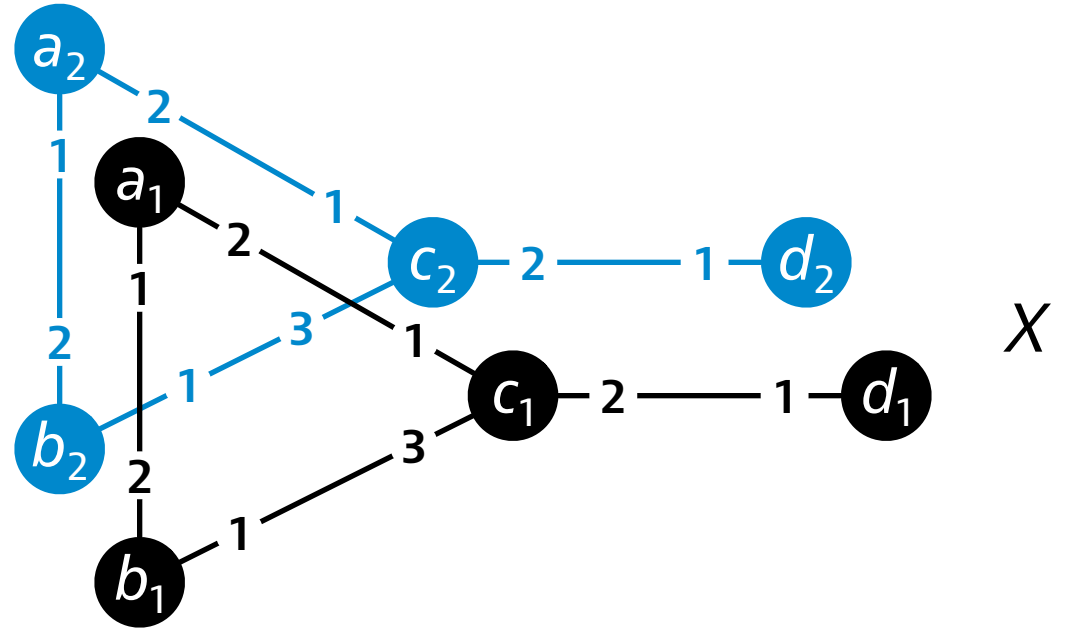
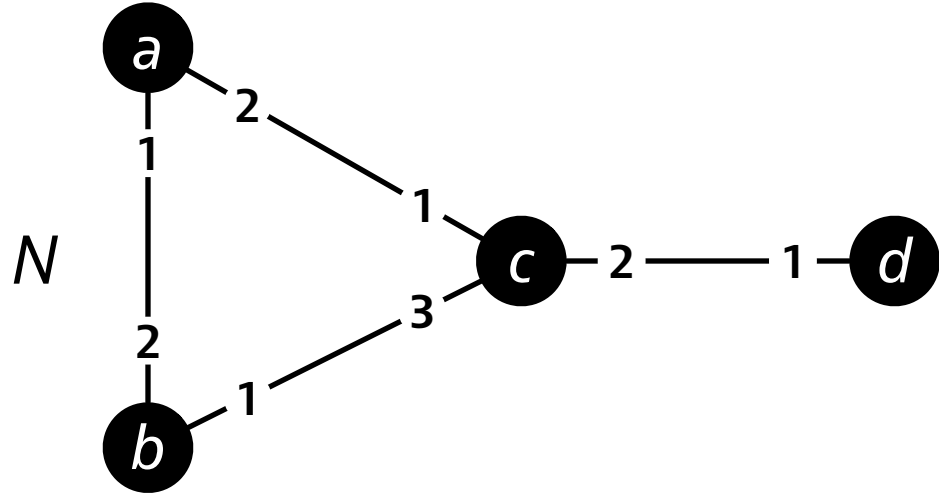
Algorithm A



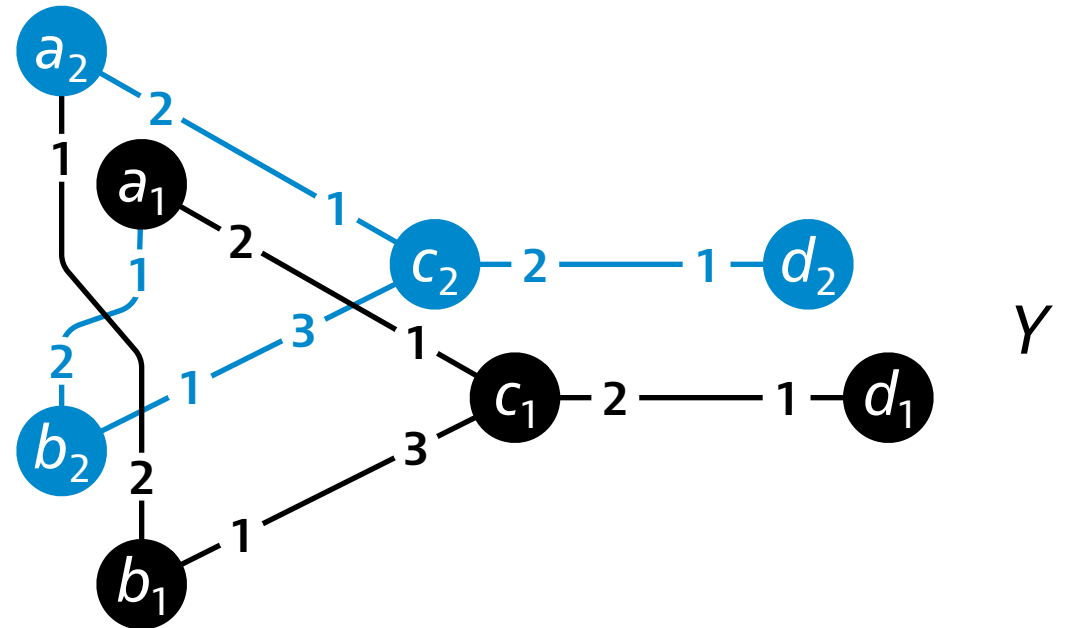
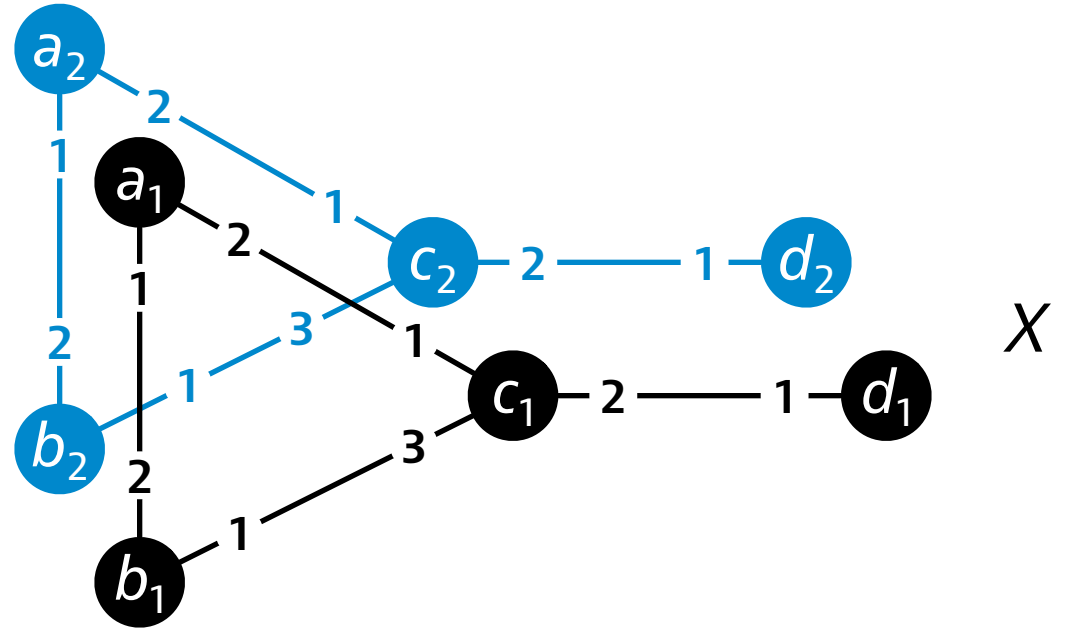
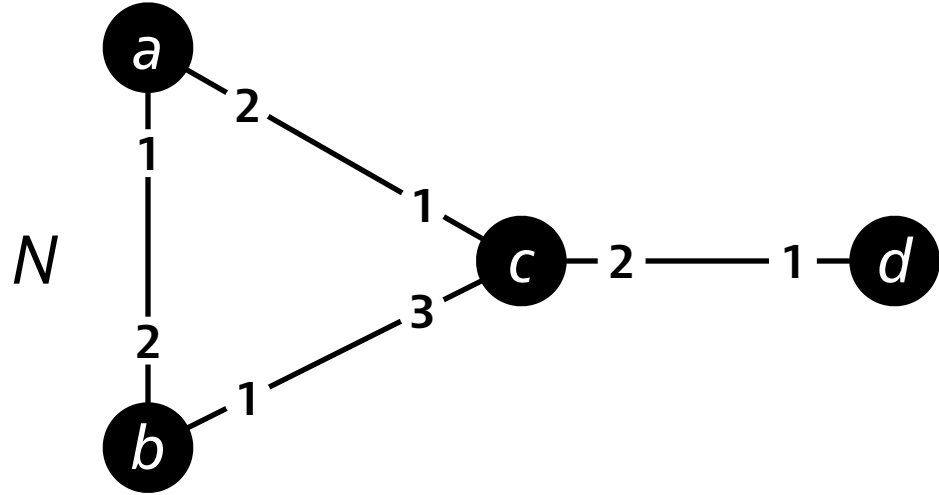
Algorithm A



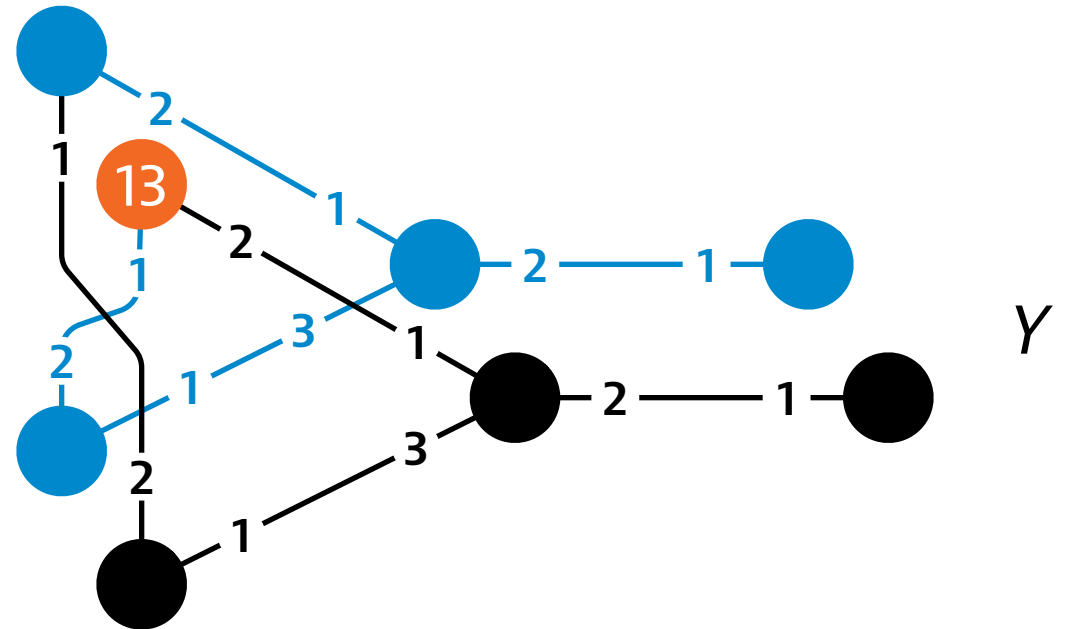
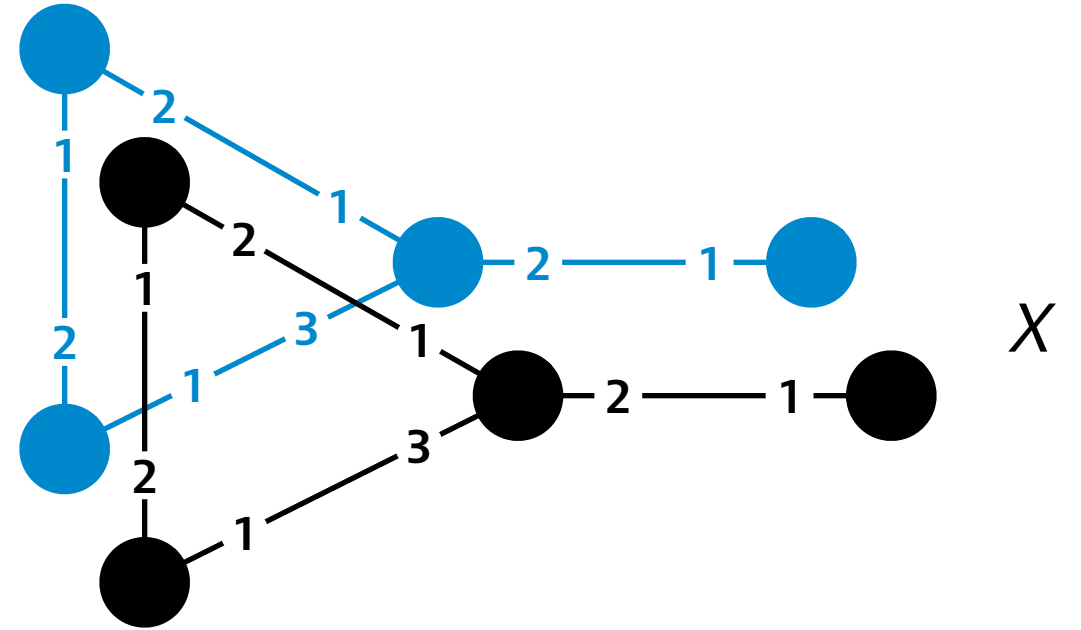
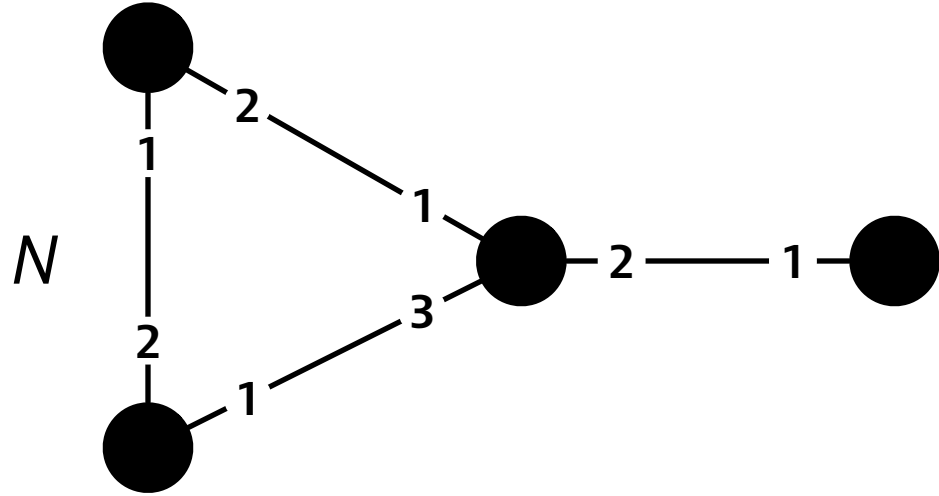
Algorithm A



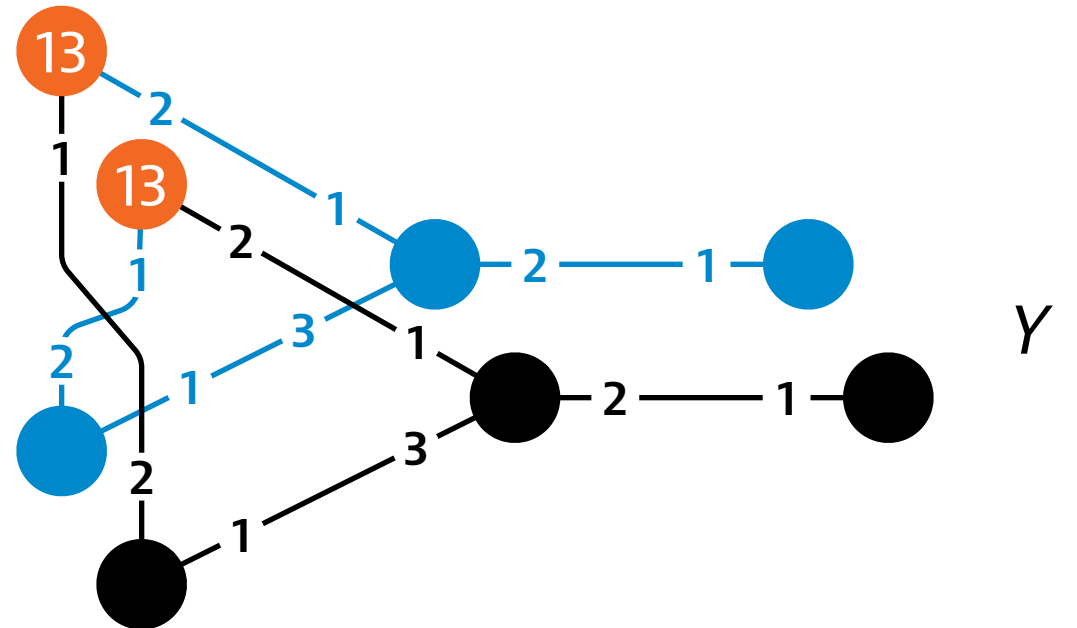
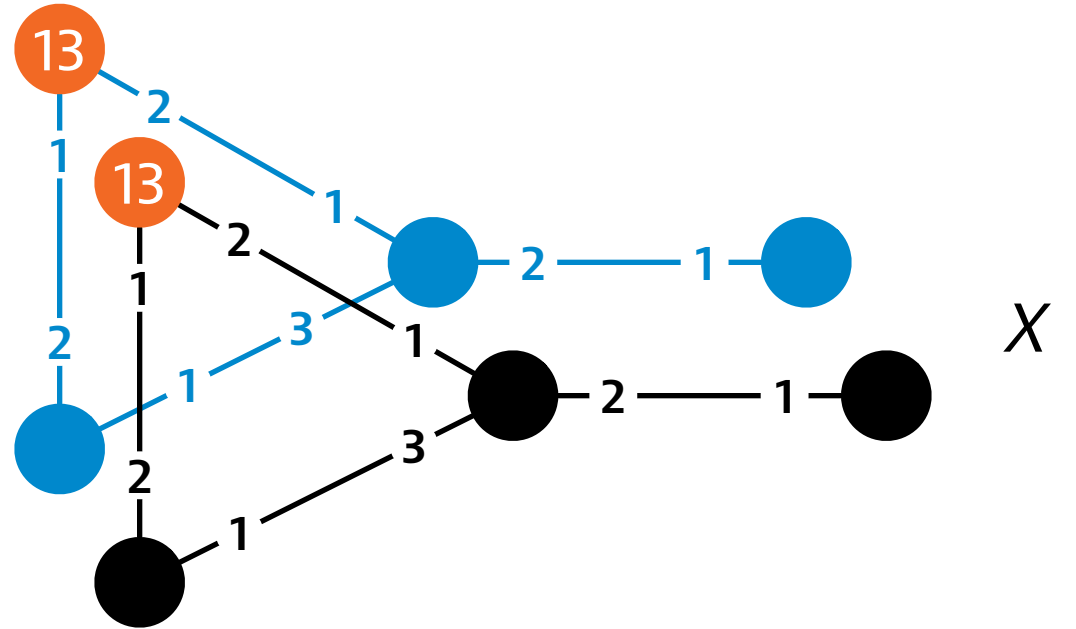
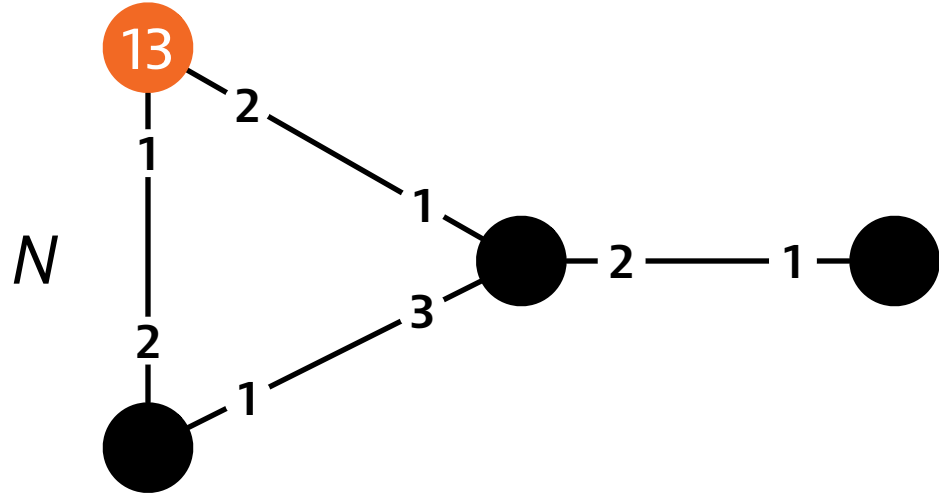
Algorithm A



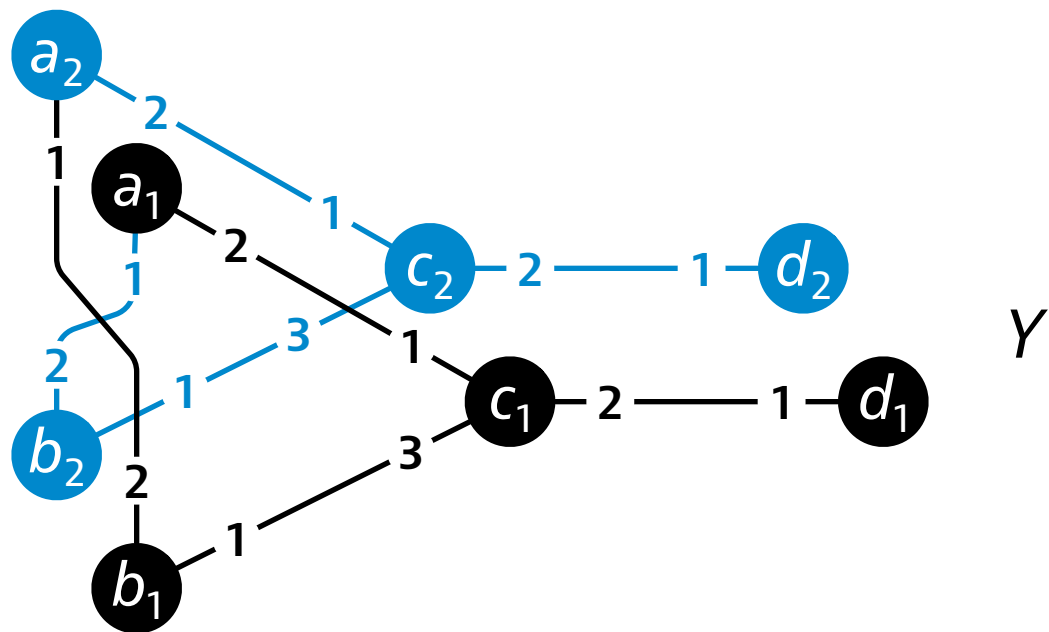
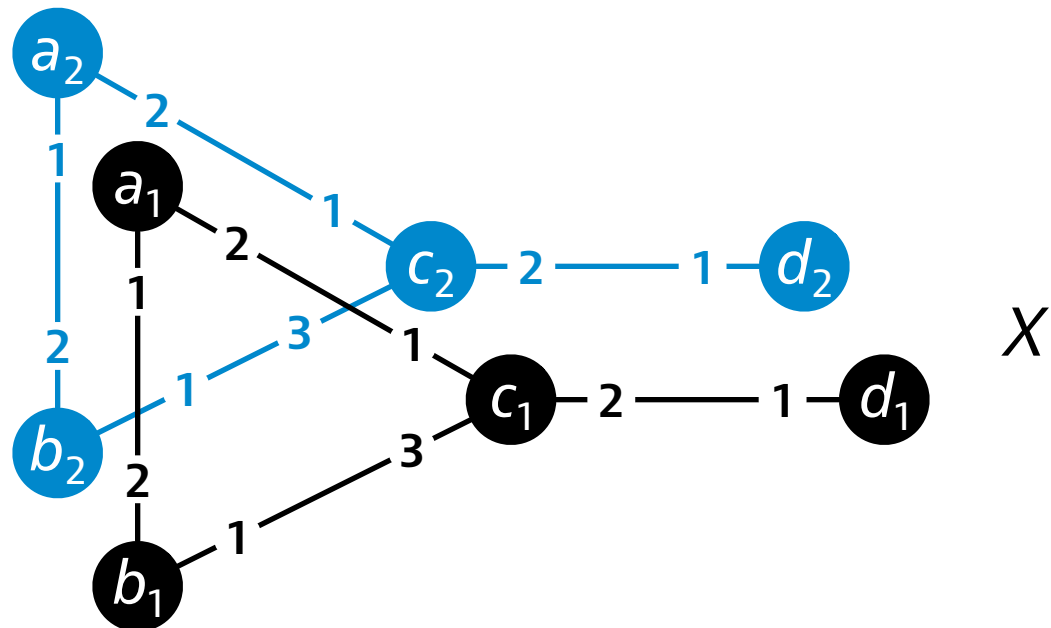
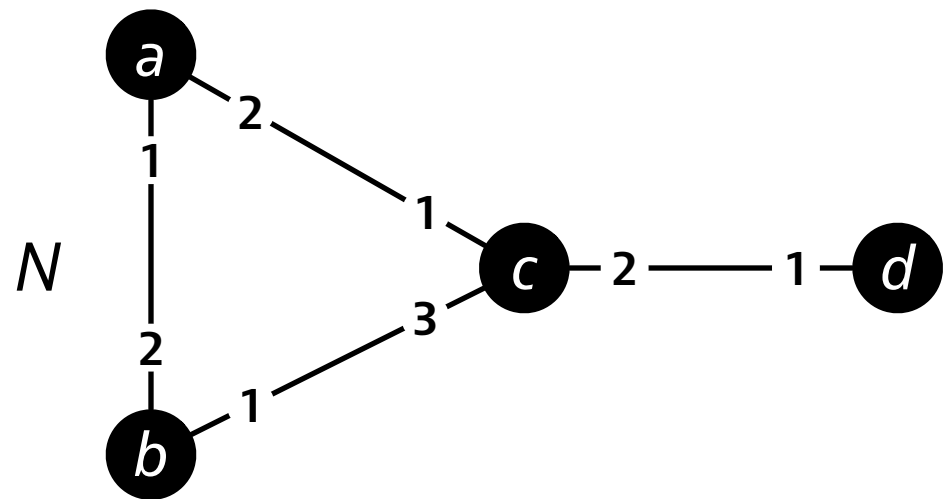
Algorithm A

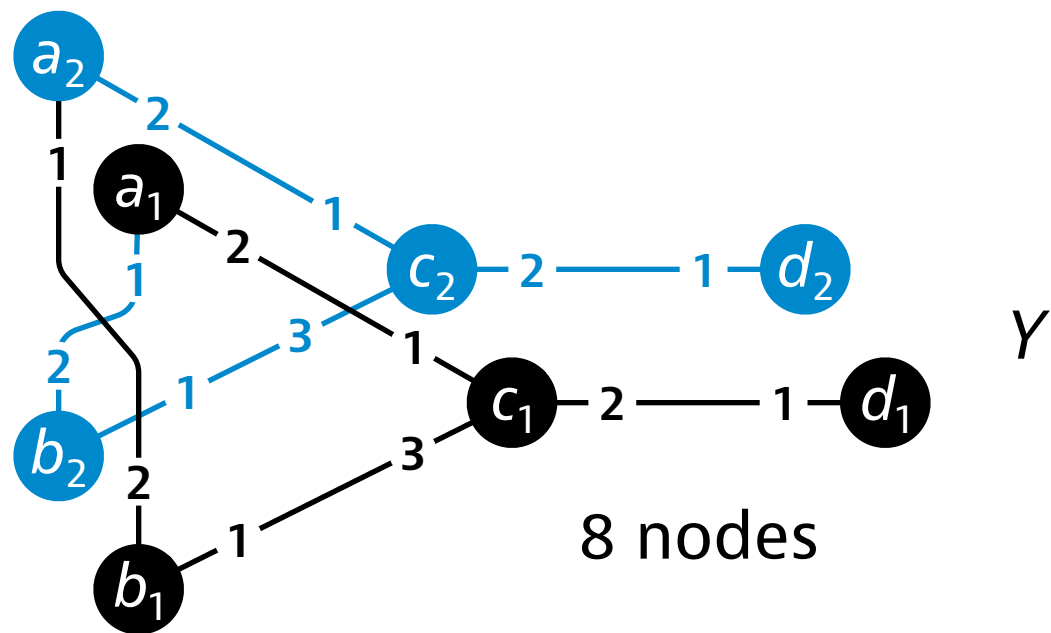
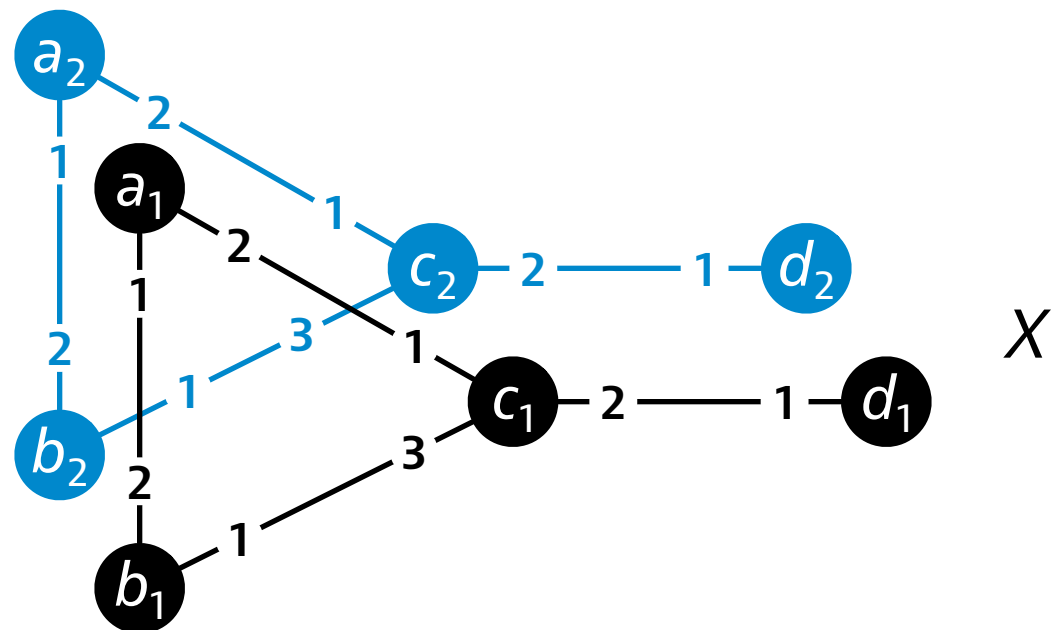
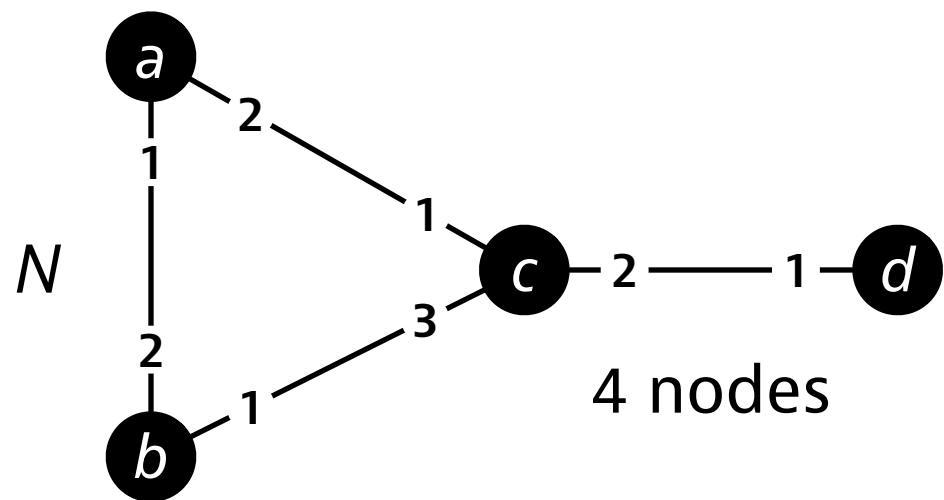


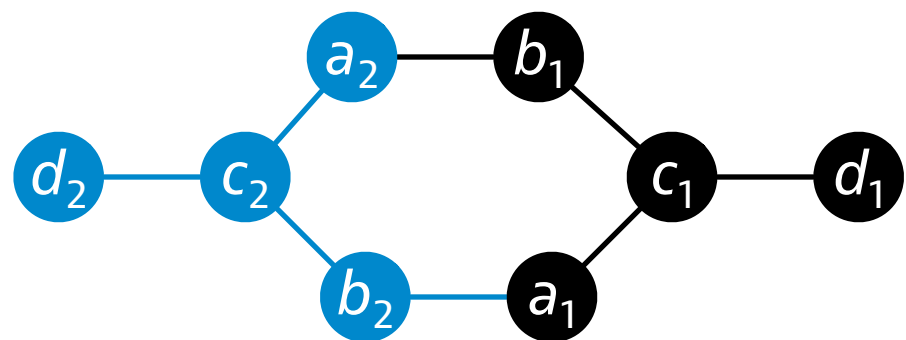
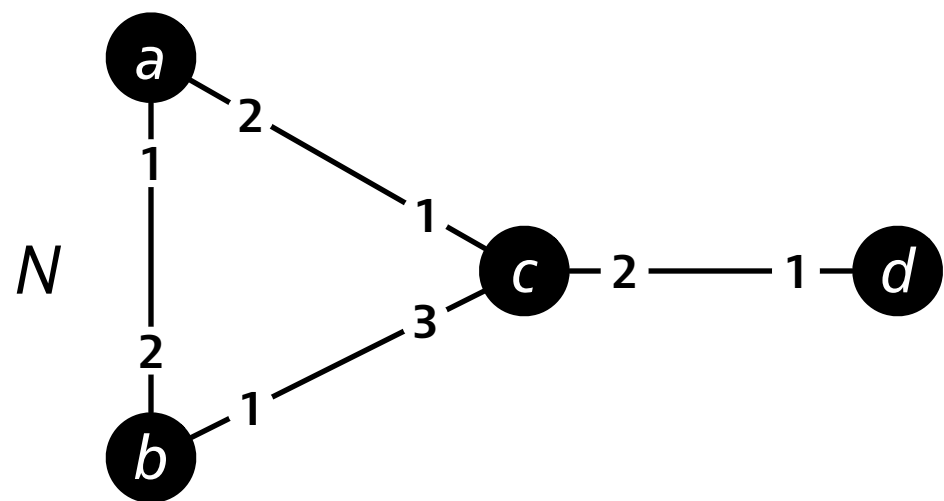
Algorithm A



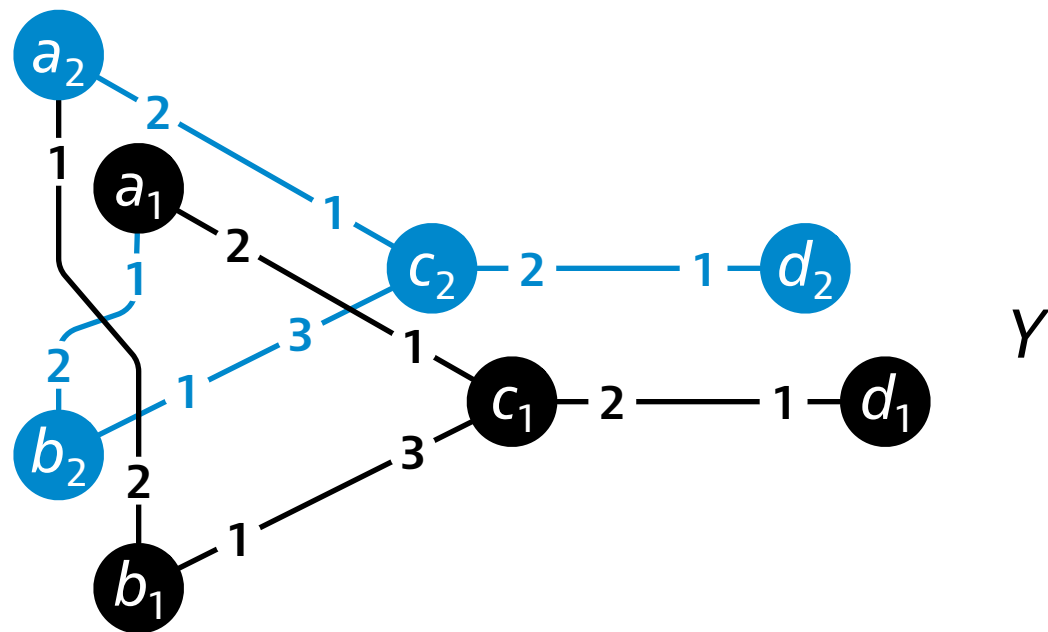
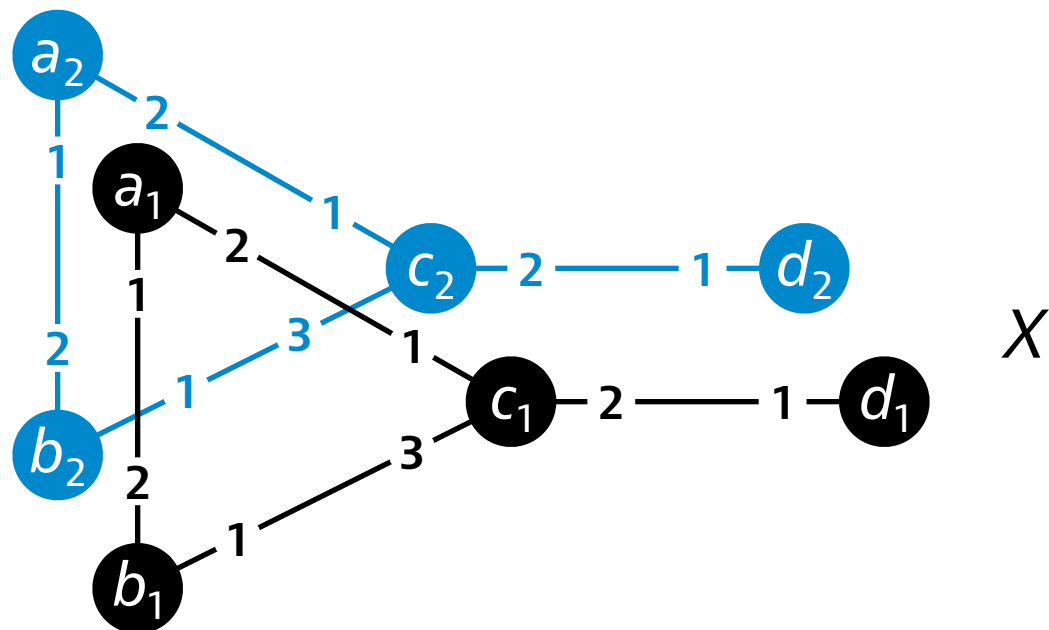
Algorithm A

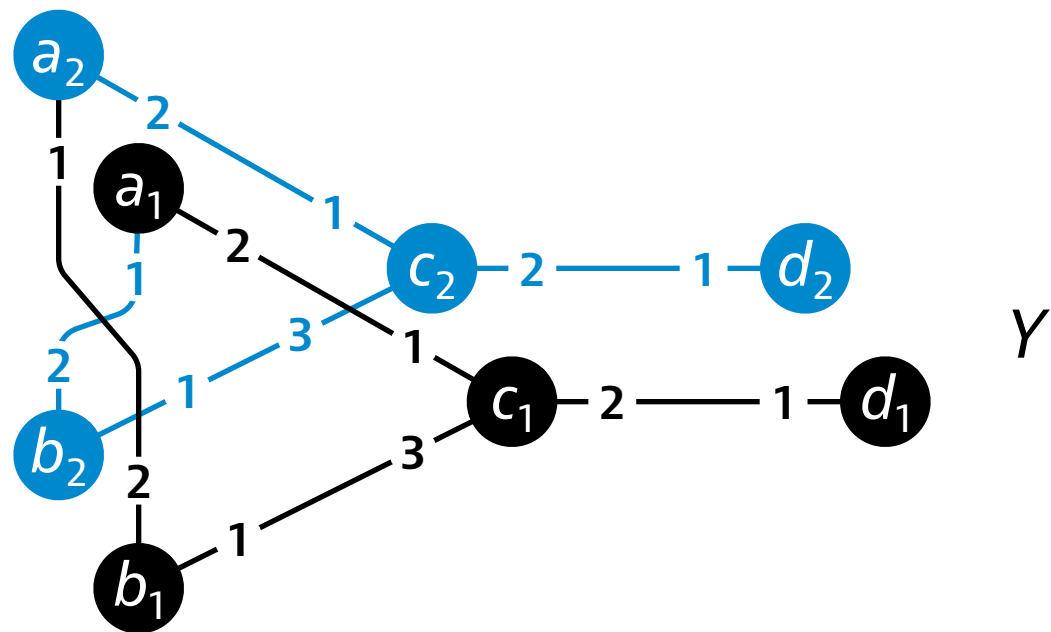
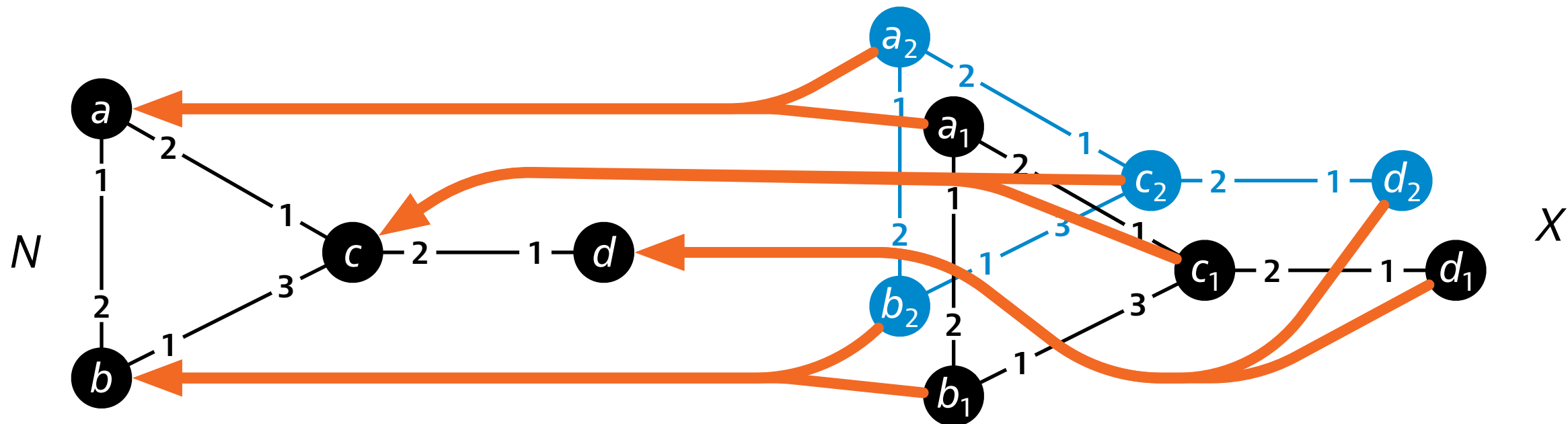


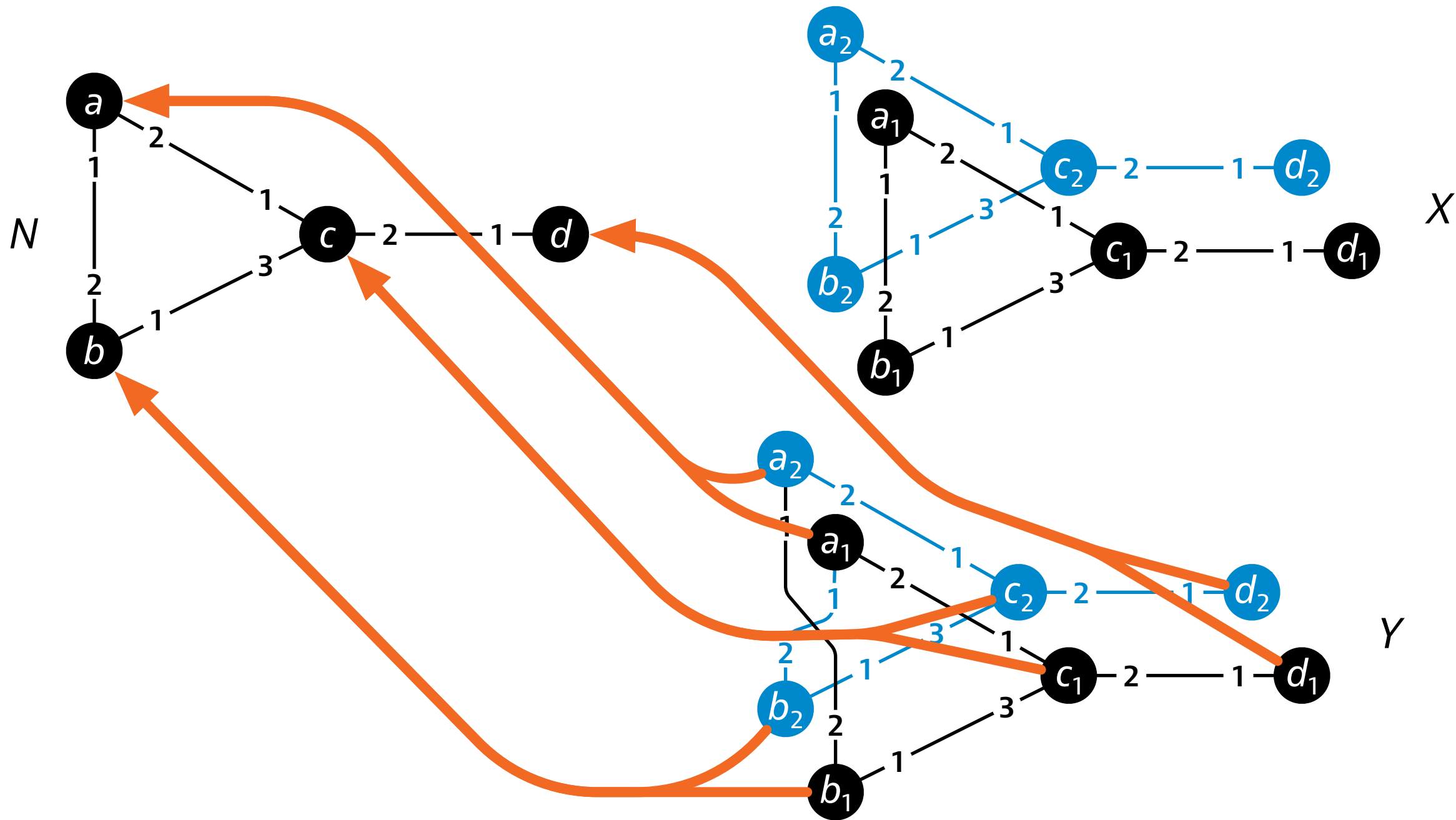


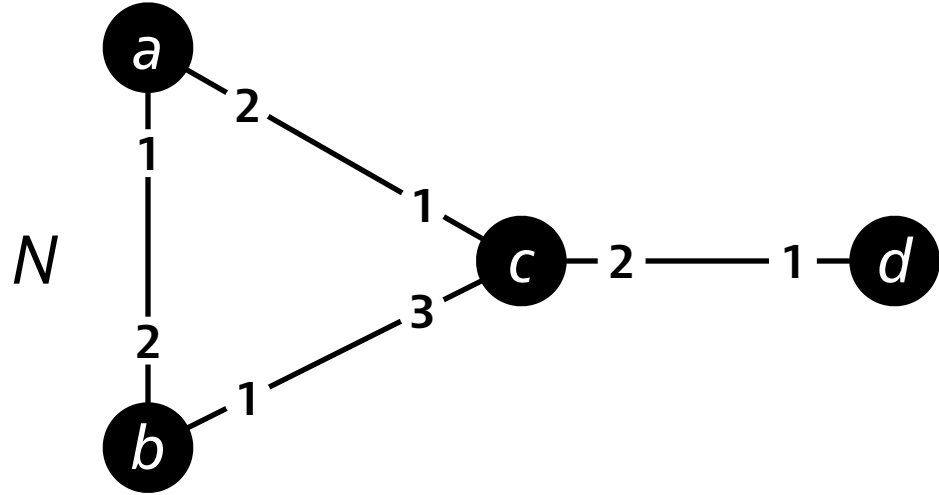


=









*Covering maps
preserve everything
in port-numbered
networks*

