## 1 Graph Theory

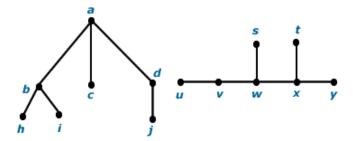
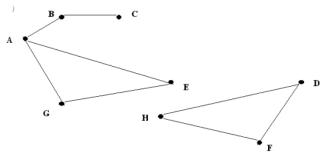


Figure 1:



- b) The Connected Components are  $\{A,B,C,G,E\}$  and  $\{D,F,H\}$
- c) Because there are two components no computer can send messages to every other computer. For example, there is no way to get a message from Andrew's computer to Hakim's.
- d) A message from Gertrude to Chitta could be routed through Andrew and Barbara

Figure 2:

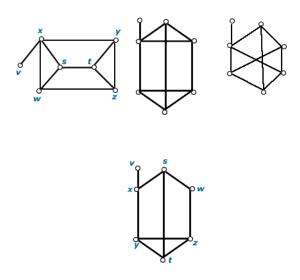


Figure 3: