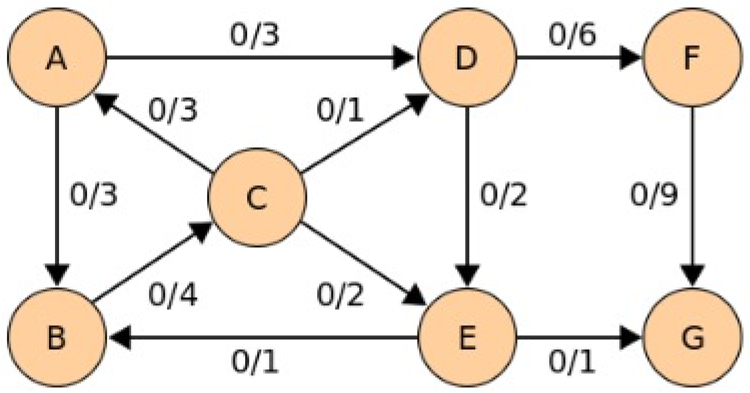
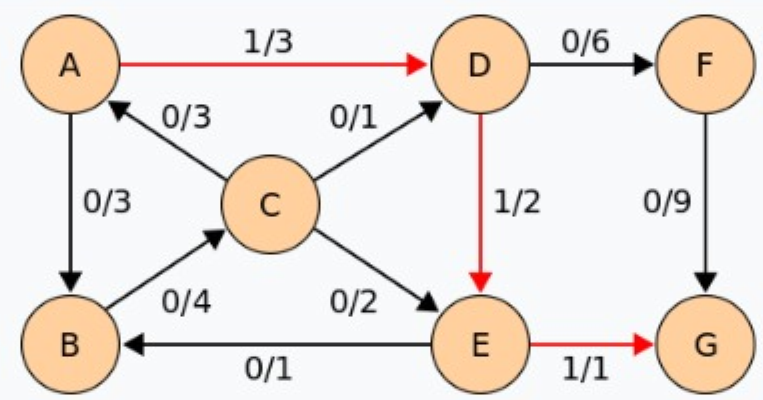
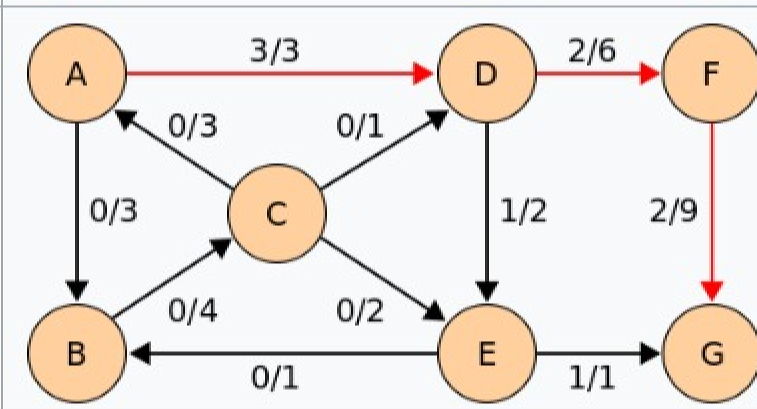
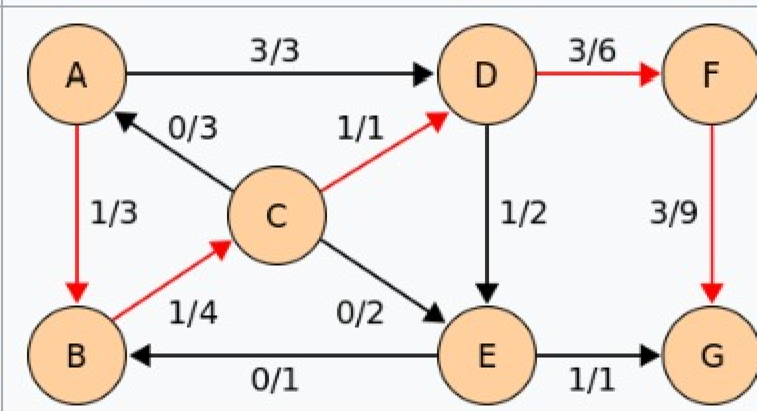
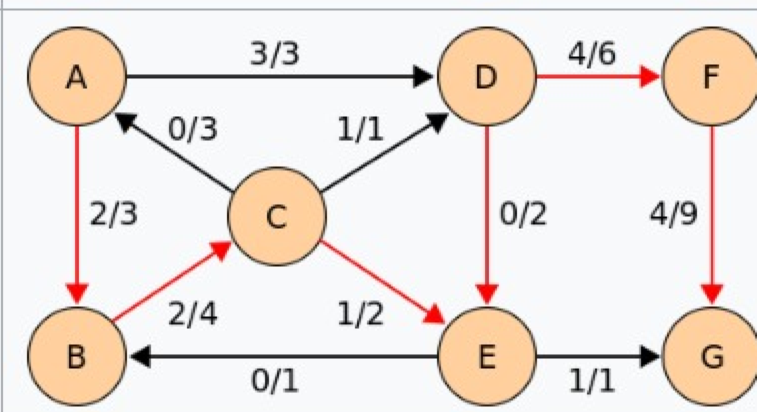
Example [edit]

Given a network of seven nodes, source A, sink G, and capacities as shown below:



In the pairs f/c written on the edges, f is the current flow, and c is the capacity. The residual capacity from u to v is $c_f(u,v) = c(u,v) - f(u,v)$, the total capacity, minus the flow that is already used. If the net flow from u to v is negative, it *contributes* to the residual capacity.

Capacity	Path	Resulting network
$\min(c_f(A,D), c_f(D,E), c_f(E,G))$ $= \min(3-0, 2-0, 1-0) =$ $= \min(3,2,1) = 1$	A, D, E, G	
$\min(c_f(A,D), c_f(D,F), c_f(F,G))$ $= \min(3-1, 6-0, 9-0)$ $= \min(2,6,9) = 2$	A, D, F, G	
$\min(c_f(A,B), c_f(B,C), c_f(C,D), c_f(D,F), c_f(F,G))$ $= \min(3-0, 4-0, 1-0, 6-2, 9-2)$ $= \min(3,4,1,4,7) = 1$	A, B, C, D, F, G	
$\min(c_f(A,B), c_f(B,C), c_f(C,E), c_f(E,D), c_f(D,F), c_f(F,G))$ $= \min(3-1, 4-1, 2-0, 0-(-1), 6-3, 9-3)$ $= \min(2,3,2,1,3,6) = 1$	A, B, C, E, D, F, G	

Notice how the length of the augmenting path found by the algorithm (in red) never decreases. The paths found are the shortest possible. The flow found is equal to the capacity across the minimum cut in the graph separating the source and the sink. There is only one minimal cut in this graph, partitioning the nodes into the sets $\{A, B, C, E\}$ and $\{D, F, G\}$, with the capacity

$$c(A,D) + c(C,D) + c(E,G) = 3 + 1 + 1 = 5.$$