Q1. 1:

Initial Δ = 16 since the largest capacity is 25.
We set all the flows to 0.

Start algorithm:

Step 1.
Δ = 16
Gf is disconnected (can't get to sink)
No paths
Δ = Δ/2

Step 2.
Δ = 8
s-d-c-t
Flow = 8

Step 3.
Δ = 8
s-b-c-t
Flow = 16

Step 4.
Δ = 8
s-d-e-c-t
Flow = 24

Step 5.
Δ = 8
No paths
Δ = Δ/2

Step 6.
Δ = 4
s-b-c-e-f-t
Flow = 28

Step 7.
Δ = 4
No paths
Δ = Δ/2

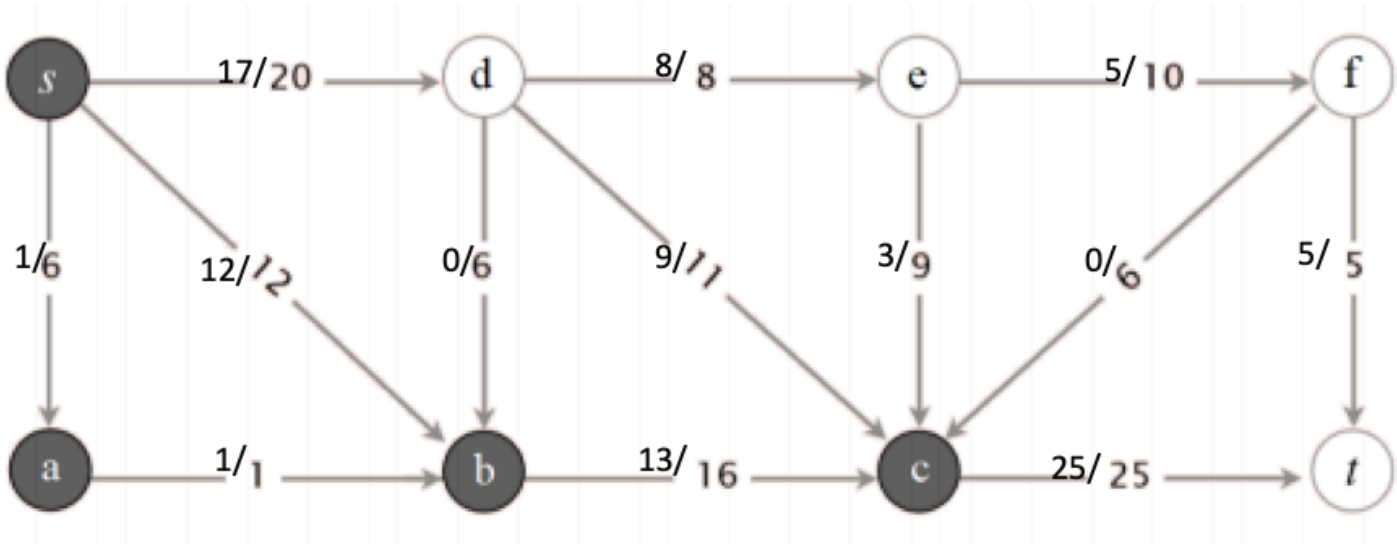
Step 8.
Δ = 2
No paths
Δ = Δ/2

Step 9.
Δ = 1
s-a-b-c-t
Flow = 29

Step 10.
Δ = 1
s-d-c-e-f-t
Flow = 30

Done, since we have no paths to the sink left and Δ = 1.
Max Flow = 30

Q1.2:
Max Flow = 30



Q1.3:
{s,a,b,c}/{d,e,f,t} is not a min cut since it's capacity is 20 + 25 = 45 which is not equal to the max flow 30. {a,b,c,d,e,s,f}/{t}, the capacity is 30 which equals the max flow. Since all the edges going to the sink have been saturated we know that we can't find any more paths and the algorithm has correctly terminated with a max flow of 30.