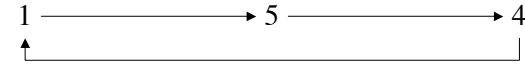


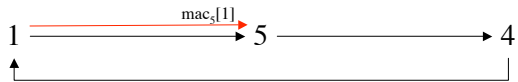
## Answers to 2/10 Homework

- $mac_i[j]$  is the mac-address-table entry at node  $i$  for destination node  $j$ .
- In the diagrams, the value of  $mac_i[j]$  is the link next to which it appears.

### Question 1 Initial state (round 0)

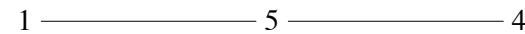


### Question 1 1 sends to 4 (round 1)



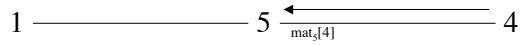
If 5 sets its mac-address-table entry to go back to 1, no messages going through 5 with destination 1 can go anywhere because the link is in the wrong direction.

### Question 2 Counterexample Initial state (round 0)



## Question 2 Counterexample

4 sends to 5 (round 1)

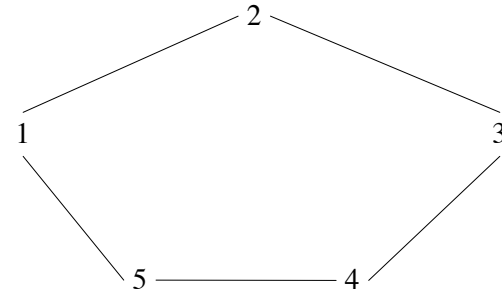


5 doesn't broadcast the message again since 5 is the destination

Node 1's mac-address-table entry for node 4 is still null

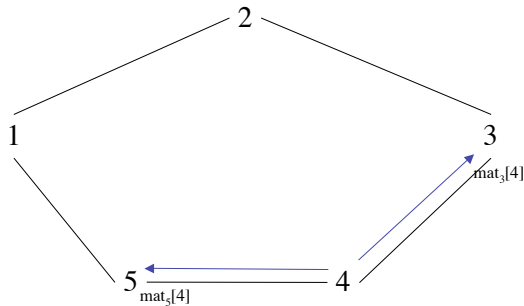
## Questions 3 & 4 Counterexample

Initial state (round 0)



## Questions 3 & 4 Counterexample

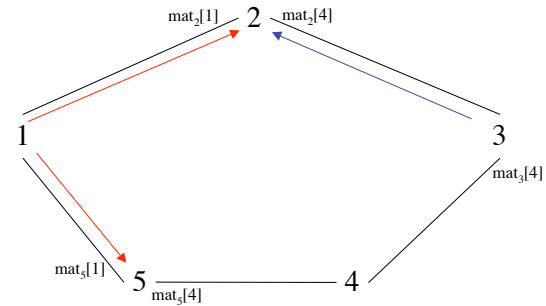
4 sends to 5 (round 1)



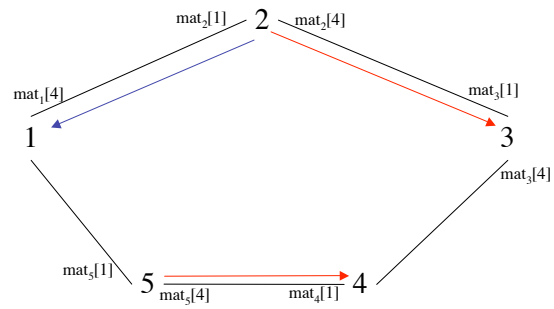
5 doesn't broadcast the message again since it's the destination

## Questions 3 & 4 Counterexample

1 sends to 4 (round 2)



# Questions 3 & 4 Counterexample (round 3)



Question 3 Counterexample: The path from 4 to 1 is 4,5,1; the path from 1 to 4 is 1,2,3,4  
Question 4 Counterexample: The shortest path from 1 to 4 is through 5; but the mac-address-table path is 1,2,3,4