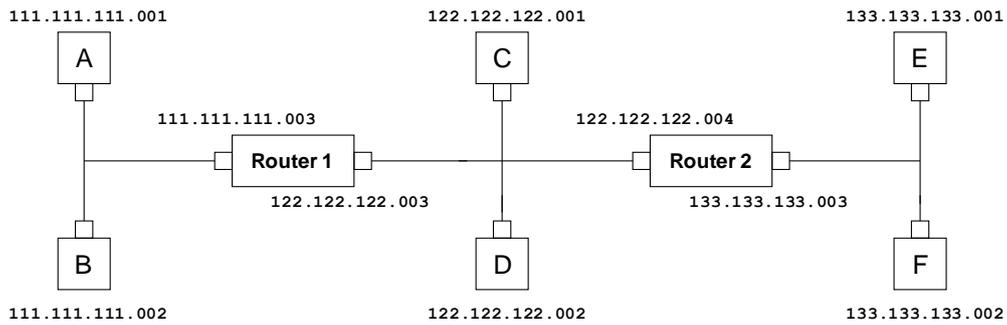




**Problem # 2 (18 points):** Consider the following IP-based network with the assigned IP addresses as shown.



1. Complete the following table assuming that host A sends an IP datagram to host D.

Source IP address	Destination IP address	IP address that was passed down to Data Link layer to be used for forwarding

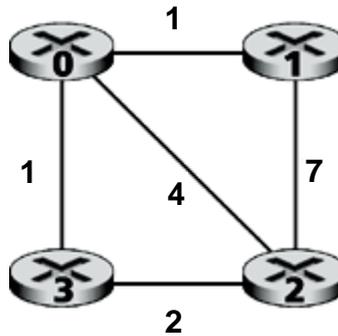
2. Complete the following table assuming that host B sends an IP datagram to host F.

Source IP address	Destination IP address	IP address that was passed down to Data Link layer to be used for forwarding

3. Complete the following table assuming that host E sends an IP datagram to host C.

Source IP address	Destination IP address	IP address that was passed down to Data Link layer to be used for forwarding

**Problem # 3 (32 points):** Consider the following network.



Starting with the initialization step, compute the distance tables for nodes 0, 1, 2, and 3 after each iteration of a synchronous version of the distance vector algorithm using as many of the following tables as needed. Start with the leftmost column of the tables.

		cost to				
		$D^0$	0	1	2	3
from	0					
	1					
	2					
	3					

		cost to				
		$D^0$	0	1	2	3
from	0					
	1					
	2					
	3					

		cost to				
		$D^0$	0	1	2	3
from	0					
	1					
	2					
	3					

		cost to				
		$D^0$	0	1	2	3
from	0					
	1					
	2					
	3					

		cost to				
		$D^0$	0	1	2	3
from	0					
	1					
	2					
	3					

		cost to				
		$D^1$	0	1	2	3
from	0					
	1					
	2					
	3					

		cost to				
		$D^1$	0	1	2	3
from	0					
	1					
	2					
	3					

		cost to				
		$D^1$	0	1	2	3
from	0					
	1					
	2					
	3					

		cost to				
		$D^1$	0	1	2	3
from	0					
	1					
	2					
	3					

		cost to				
		$D^1$	0	1	2	3
from	0					
	1					
	2					
	3					

		cost to				
		$D^2$	0	1	2	3
from	0					
	1					
	2					
	3					

		cost to				
		$D^2$	0	1	2	3
from	0					
	1					
	2					
	3					

		cost to				
		$D^2$	0	1	2	3
from	0					
	1					
	2					
	3					

		cost to				
		$D^2$	0	1	2	3
from	0					
	1					
	2					
	3					

		cost to				
		$D^2$	0	1	2	3
from	0					
	1					
	2					
	3					

		cost to				
		$D^3$	0	1	2	3
from	0					
	1					
	2					
	3					

		cost to				
		$D^3$	0	1	2	3
from	0					
	1					
	2					
	3					

		cost to				
		$D^3$	0	1	2	3
from	0					
	1					
	2					
	3					

		cost to				
		$D^3$	0	1	2	3
from	0					
	1					
	2					
	3					