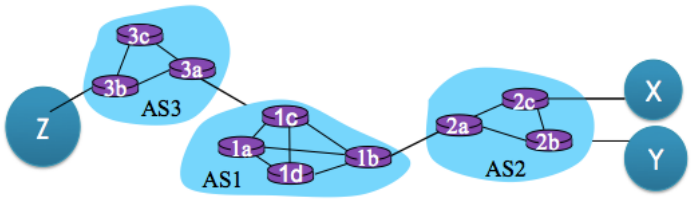
COMP 375 (Computer Networks): Quiz #9
Monday, May 7, 2018

Name: _____**SOLUTIONS**_____

1. Consider the following network.



What would be the BGP AS-PATH and NEXT-HOP to get **to** destination **Z from 2b**?

AS-PATH: **AS1, AS3**

NEXT-HOP: **2a – 1b interface**

2. Do channel partitioning protocols such as time-division multiple access (TDMA) allow a host to send at the full link bandwidth (*R* bps) if it is the only one trying to send? Explain why or why not.

No. In these protocols, each host gets only a portion of some resource (e.g. time or frequency). Even if no other hosts want to use their allotted portions, the one host that does still only gets its fraction of the resources. If there are N hosts in the network, each host can use at most R/N bps of bandwidth.

3. Briefly describe the process by which a host adds a new entry to its ARP table (i.e. how does it find the info it needs to fill in a new entry?).

If a host needs to know the MAC address associated with an IP address, it will broadcast a message saying something similar to "Who is 1.2.3.4?". If a host has that IP address, they will hear the broadcast, then reply directly to the sender of that broadcast, telling them their MAC address. The original host can then add this (IP address, MAC address) pair to their table, valid for a limited amount of time (its TTL).