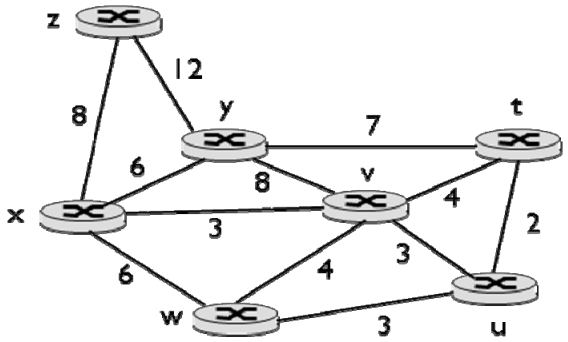
CS4392/5376: Computer Networks/Communication Networks
Summer II 2021

Quiz #3

- Full name only: _____
- Release date: July 29th, 2021 (Thursday)
- Due date: **August 2nd, 2021 (Monday) before midnight, 11:59 PM**
- It should be done INDIVIDUALLY; Show ALL your work; Write your answer in a Word file and submit it through the Blackboard
- Total 5 points

1. Consider the following network. With the indicated link costs, use Dijkstra's shortest-path algorithm to compute the shortest path from x to all network nodes. Show how the algorithm works by computing a table similar to the below (e.g., Table 5.1 in pp. 381).

[2.5 pts]



step	N'	D(v),p(v)	D(w),p(w)	D(x),p(x)	D(y),p(y)	D(z),p(z)
0	u	2,u	5,u	1,u	∞	∞
1	ux	2,u	4,x		2,x	∞
2	uxy	2,u	3,y			4,y
3	uxyv		3,y			4,y
4	uxyvw					4,y
5	uxyvwz					

2. Consider the network shown below and assume that each node initially knows the costs to each of its neighbors. Consider the distance-vector algorithm and show the distance table entries at node z (e.g., Figure 5.6 in pp. 387).

[2.5 pts]