Computer Networks - Assignment 9

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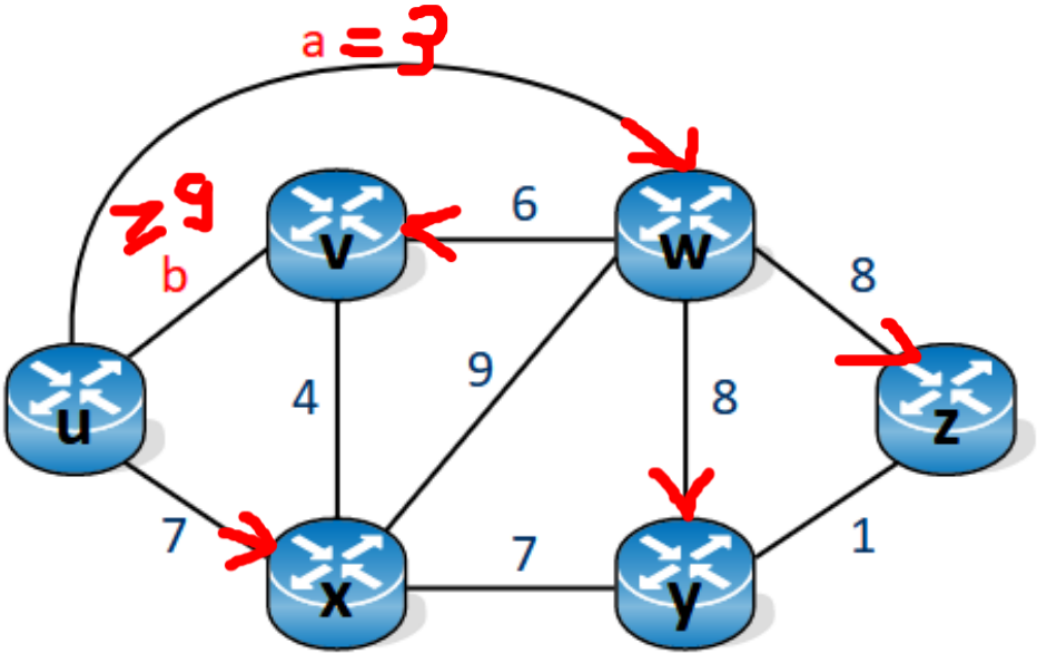
Task 1

a)

We marked the predecessors for the shortest paths in the following image:



Because the table states that the shortest path from u to w is a direct connection, we can set a to 3, because a is the wheight of the connection between u to w.
Since we also know that the shortest path to v has its predecessor as w, and we know the shortest path to w, which is u $\rightarrow$ w with wheight 9, we know b must be bigger or equal to 9.

b)

1: Distance vectors before x is added

Destination	dv(u)	dv(v)	dv(w)
u	0	2	6
v	2	0	4
w	6	4	0

2: Initial distance vector of x

Destination	dv(x)
u	$+\infty$
v	2
w	1
x	0

3: Distance vector of x after receiving distance vectors of v and w

Destination	dv(x)
u	**4**
v	2
w	1
x	0

4: Distance vectors of v, w after receiving the new distance vector of x

Destination	dv(v)	dv(w)
u	2	5
v	0	**3**
w	**3**	0
x	**2**	**1**

(v $\rightarrow$ x and w $\rightarrow$ x changed from $+\infty$ to their values now, so they have to be marked)