Q1, see my slides

Q2.

$\text{cost}(5,9) = 0$

$\text{cost}(4,7) = 7$

$\text{cost}(4,8) = 3$

$\text{cost}(3,4) = \min \begin{cases} \overset{1}{c(4,7)} + \overset{7}{\text{cost}(4,7)} \\ \overset{4}{c(4,8)} + \overset{3}{\text{cost}(4,8)} \end{cases} = 7$

$\text{cost}(3,5) = \min \begin{cases} \overset{6}{c(5,7)} + \overset{1}{\text{cost}(4,7)} \\ \overset{2}{c(5,8)} + \overset{3}{\text{cost}(4,8)} \end{cases} = 5$

$\text{cost}(3,6) = \min \begin{cases} \overset{6}{c(6,7)} + \overset{7}{\text{cost}(4,7)} \\ \overset{2}{c(6,8)} + \overset{3}{\text{cost}(4,8)} \end{cases} = 5$

$\text{cost}(2,2) = \min \begin{cases} \overset{3}{c(2,4)} + \overset{7}{\text{cost}(3,4)} \\ \overset{3}{c(2,6)} + \overset{5}{\text{cost}(3,6)} \end{cases} = 8$

$$\text{cost}(2,3) = \min \begin{cases} \overset{6}{c(3,4)} + \overset{7}{\text{cost}(3,4)} \\ \overset{3}{c(3,5)} + \overset{5}{\text{cost}(3,5)} = 10 \\ \overset{8}{c(3,6)} + \overset{5}{\text{cost}(3,6)} \end{cases}$$

$$\text{cost}(1,1) = \min \begin{cases} \overset{5}{c(1,2)} + \overset{8}{\text{cost}(2,2)} \\ \overset{2}{c(1,3)} + \overset{10}{\text{cost}(2,3)} \end{cases} = 12$$

V	1	2	3	4	5	6	7	8	9
c	(12)	8	10	7	5	5	7	3	0
d	3	6	5	8	8	8	9	9	9

$1 \rightarrow 3 \rightarrow 5 \rightarrow 8 \rightarrow 9$