1. The dissimilarity map δ for A, B, C, and D is shown below. Find an example to show that δ is *not* an ultrametic. Then find the "closest" ultrametic to δ.

δ	A	B	C	D
A	0	6	4	2
B	6	0	1	3
C	4	1	0	5
D	2	3	5	0

2. The dissimilarity map d below for G, H, I, J, and K is a *tree metric*. Find a tree $\mathcal{T}$ and edge weights w associated with d.

d	G	H	I	J	K
G	0	5	6	8	7
H	5	0	5	5	6
I	6	5	0	8	3
J	8	5	8	0	9
K	7	6	3	9	0