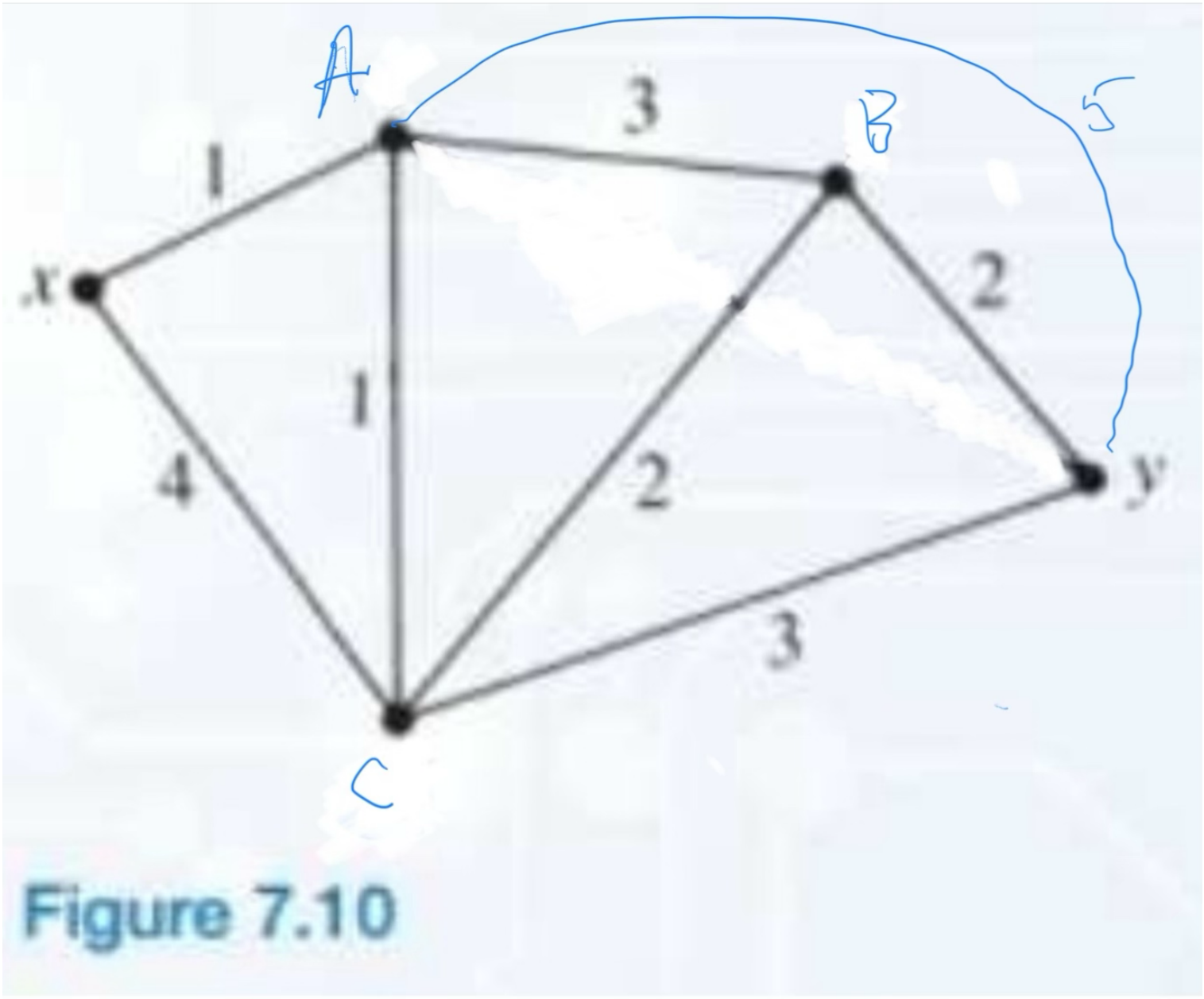
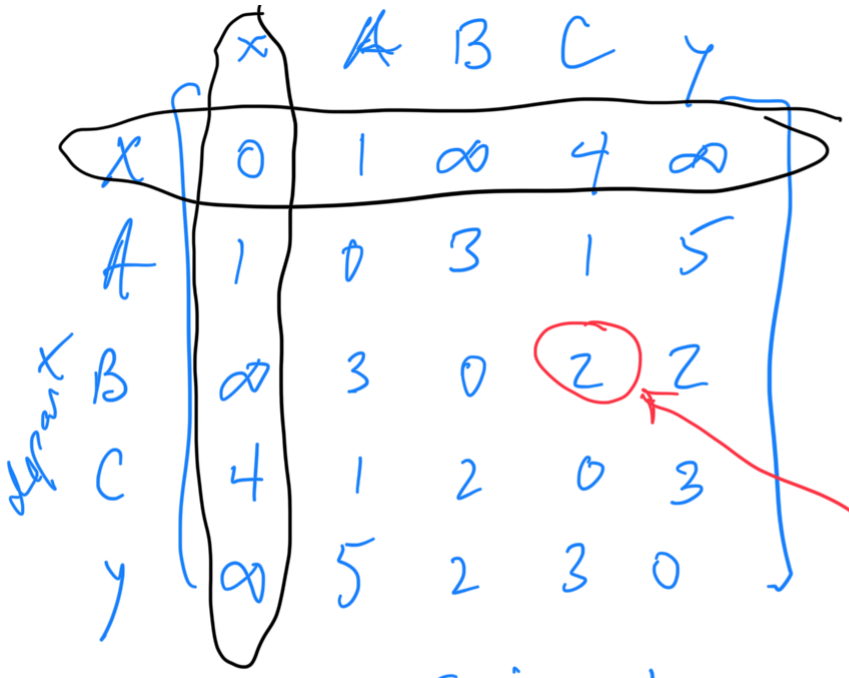


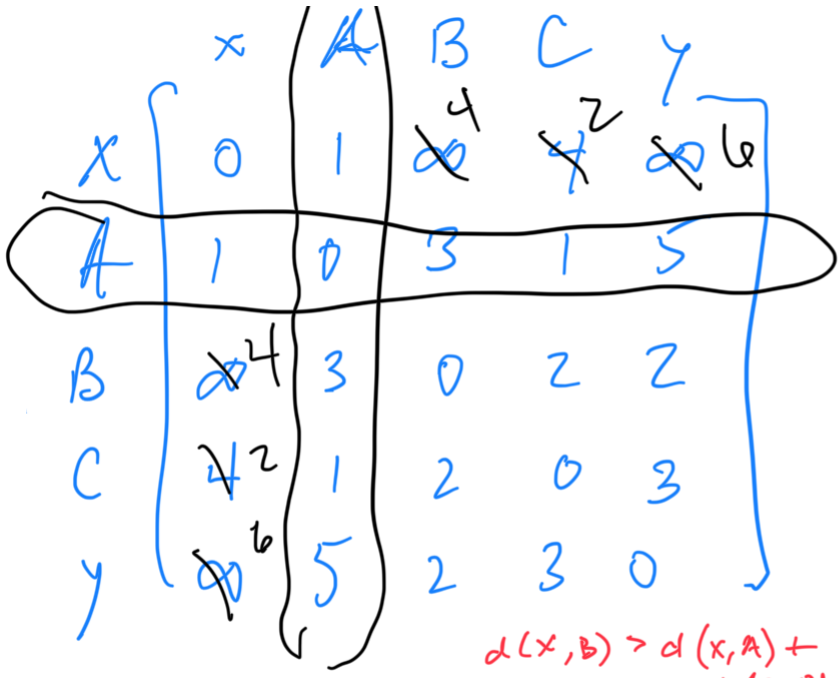

Figure 7.10




Looking for shortcuts:

$d(i,k) + d(k,j) < d(i,j)$ ?

$d(B,C) = 2$ is $d(B,x) + d(x,C)$ less?



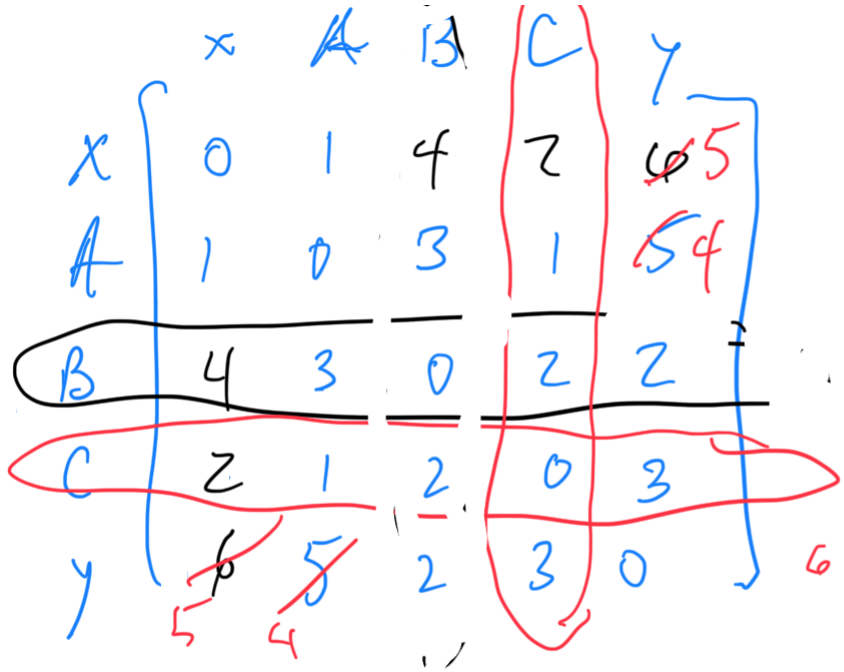

No: $d(B,x) = \infty$, + $d(x,C) = 4$.

We step through & check each entry. In the first pass, no improvements are made.

$d(x,B) > d(x,A) +$ $d(A,B)$ $= 1 + 3$

Three improvements:

Then we step using A ...



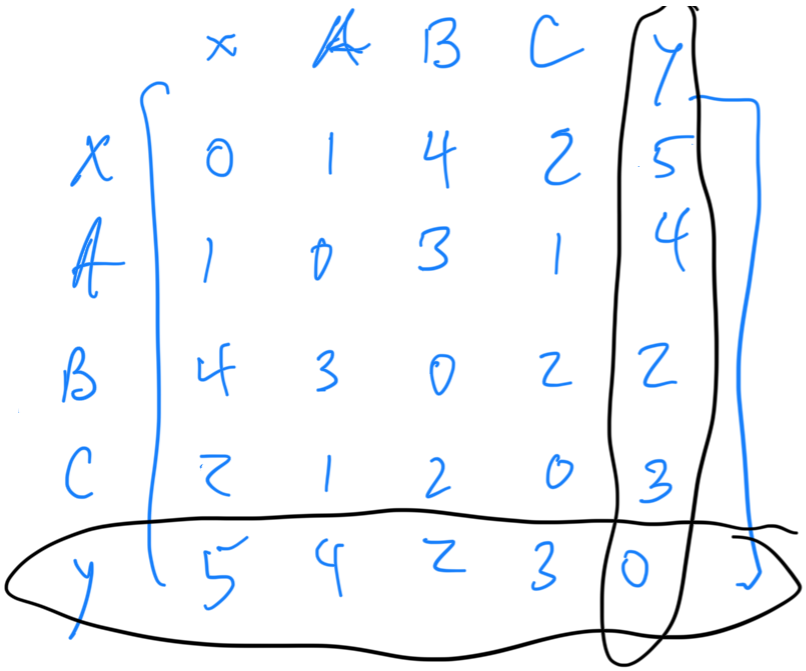

B provides no improvement; Let's try C.

x y + A y are both updated:

$6 = d(x,y) > d(x,C) + d(C,y)$

$2 + 3$

So $d(x,y) = 5$.




Once we've passed through all the nodes, the matrix will contain shortest distances, but not paths.