Example 8.4.2

From line 2–5, we have $L(a)=0$ and $L(b)=L(c)=L(d)=L(e)=L(g)=L(f)=L(z)=\infty$, and $T=\{a,b,c,d,e,f,g,z\}$.

At line 8, z is not circled (it has temporary label),

proceed to line 9; Select vertex a (the uncircled vertex with the smallest label) and circle it.

" line 10, $T:=\{b,c,d,e,f,g,z\}$.

" lines 11 & 12 update the uncircled vertices adjacent to vertex a.

$L(b)=\min\{\infty, 0+2\}=2$ (∞: $L(b)$; 0: $L(a)$; 2: $w(a,b)$), $L(f)=\min\{\infty, 0+1\}=1$.

proceed to line 8, z is not circled.

" " line 9, choose vertex f (the uncircled vertex w/ the smallest label) & circle it.

" line 10, $T:=\{b,c,d,e,g,z\}$

" lines 11 & 12 update the uncircled vertices adjacent to vertex f

$L(d)=\min\{\infty, 1+3\}=4$ (∞: $L(d)$; 1: $L(f)$; 3: $w(f,d)$), $L(g)=\min\{\infty, 1+5\}=6$

" " line 8, z is not circled.

" " line 9, choose vertex b (the uncircled vertex w/ the smallest label) & circle it.

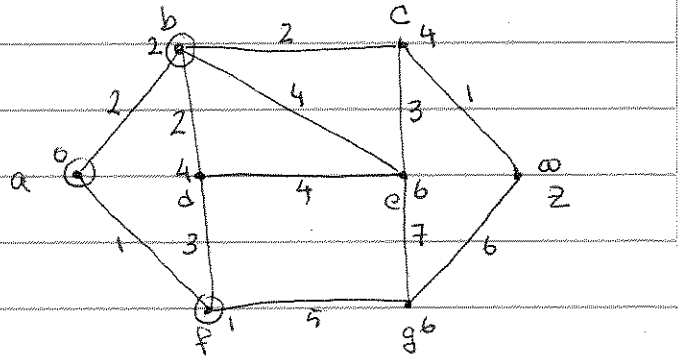
" line 10, $T:=\{c,d,e,g,z\}$

" line 11 & 12 update the uncircled vertices adjacent to vertex b.

$L(d)=\min\{4, 2+2\}=4$ (4: $L(d)$; 2: $L(b)$; 2: $w(b,d)$), $L(c)=\min\{\infty, 2+2\}=4$ Tie breaker ?

$L(e)=\min\{\infty, 2+4\}=6$

" line 8, z is not circled.



tie breaker rule

Proceed to line 9, choose vertex d (the uncircled vertex w/ the smallest label) & circle it

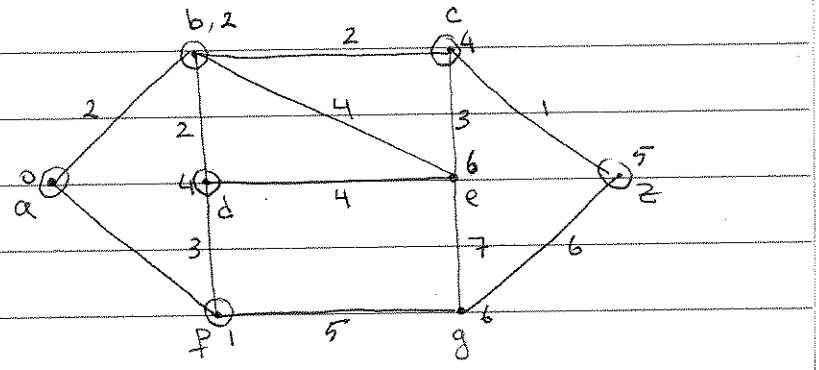
" " line 10, $T := \{c, e, g, z\}$

" " line 11 & 12 update the uncircled vertex e (adjacent to vertex d)

$L(e) = \min\{6, 4+4\} = 6$

" " line 8, z is not circled.

" " line 9, choose vertex c (the uncircled vertex w/ the smallest label) & circle it.



" " line 10, $T := \{e, g, z\}$.

" " line 11 & 12 update the uncircled vertices e and z (adjacent to vertex c)

$L(e) = \min\{6, 4+3\} = 7$, $L(z) = \min\{\infty, 4+1\} = 5$

" " line 8, z is not circled.

" " line 9, choose vertex z (the uncircled vertex w/ the smallest label) & circle it.