أوجدي الحل الأمثل للمسائل التالية باستخدام طريقة الركن الشمالي الغربي

A-

Destination\Sources	D₁	D₂	D₃	Supply
S₁	1	2	3	100
S₂	4	1	5	110
Demand	80	70	60	

Destination\Sources	D₁	D₂	D₃	Supply
S₁	1 80	2 20	3	100
S₂	4	1 50	5 60	110
Demand	80	70	60	

IBFS:

$X_{11}=80, X_{12}=20, X_{22}=50, X_{23}=60$

And TTC=80*1+20*2+50*1+60*5=470

		$V_1=1$	$V_2=2$	$V_3=6$	
	Destination\Sources	D₁	D₂	D₃	Supply
$U_1=0$	S₁	1 80	- 2 20	3 + $\delta_{13}=3$	100
$U_2=-1$	S₂	4 $\delta_{21}=-4$	+ 1 50	- 5 60	110
	Demand	80	70	60	

		$V_1=1$	$V_2=-1$	$V_3=3$	
	Destination\Sources	D₁	D₂	D₃	Supply
$U_1=0$	S₁	1 80	2 $\delta_{12}=-1$	3 20	100
$U_2=2$	S₂	4 $\delta_{21}=-1$	1 70	5 40	110
	Demand	80	70	60	

Then the optimal solution

$X_{11}=80, X_{13}=20, X_{22}=70, X_{23}=40$

And TTC=80*1+20*3+70*1+40*5=410

B-

Destination / Sources	D₁	D₂	D₃	Supply
S₁	1	2	3	100
S₂	4	1	5	130
Demand	80	70	60	210≠230

Destination / Sources	D₁	D₂	D₃	D₄(Dummy)	Supply
S₁	1	2	3	0	100
S₂	4	1	5	0	130
Demand	80	70	60	20	230=230

		$V_1=1$	$V_2=2$	$V_3=6$	$V_4=-1$	
	Destination / Sources	D₁	D₂	D₃	D₄(Dummy)	Supply
$U_1=0$	S₁	1 80	2 20	3 $\delta_{13}=3$	0 $\delta_{14}=1$	100
$U_2=-1$	S₂	4 $\delta_{21}=-4$	1 50	5 60	0 20	130
	Demand	80	70	60	20	230=230