

	$X_{S1}$	$X_{S2}$	$X_{S3}$	$X_{I1}$	$X_{I2}$	$X_{I3}$	$X_{I4}$	$X_{I5}$	$X_{I6}$	$X_{I7}$	$X_{I8}$	$X_{I9}$	$X_{I10}$	$X_{I11}$	$X_{I12}$	$X_{I13}$	$X_{I14}$	$X_{I15}$	$X_{I16}$	$X_{I17}$	$X_{I18}$	$X_{I19}$	$X_{I20}$	
MAX $Z_1$	1	1	1																					
MAX $Z_2$																								
1	1			-1	-1	-1																		
2		1																						
3			1																					
I				1																				
II					1																			
III						1																		
IV							1																	
Capacity	20	20	200	30	5	40	5	90	100	40	30	40	200	10	60	20								

TORA Solution: Maximum Flow = 185

- $X_{S1} = 20, X_{S2} = 20, X_{S3} = 145, X_{I1} = 20, X_{I2} = 5, X_{I3} = 15$
- $X_{I4} = 100, X_{I5} = 10, X_{I6} = 30, X_{I7} = 5$
- $X_{I8} = 120, X_{I9} = 10, X_{I10} = 35, X_{I11} = 20$

Note: No constraints are necessary for nodes S and T.

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	$X_{12}$	$X_{13}$	$X_{15}$	$X_{21}$	$X_{24}$	$X_{25}$	$X_{32}$	$X_{34}$	$X_{35}$	$X_{42}$	$X_{43}$	$X_{45}$
MAX $Z_1$	1	1	1									
MAX $Z_2$			1									
②	1			-1	-1	-1						
③		1					-1	-1				
④					1				-1	-1		
Quantity	8	14	4	5	7	6	10	9	10	6	7	5

TORA Solution:

- $X_{12} = 8, X_{13} = 13, X_{15} = 4$
- $X_{24} = 5, X_{25} = 6$
- $X_{32} = 3, X_{35} = 10, X_{45} = 5$

max flow = 25

Note: Node ① and ⑤ do not have corresponding constraints because they represent the source and sink nodes, respectively.

continued...