

MATH 318: Operations Research

Spring 2023

Assignment 8

Due: Monday, April 17

READ: Hillier & Lieberman: Chapter 10, Sections 1 - 5

PROBLEMS: Write up clear and complete solutions for the following problems from Hillier and Lieberman:

10.2 – 1

10.3-2abde

10.3-3ab Use the numbers in the table below rather than the ones in the text:

		<i>j</i>		
		1	2	3
<i>i</i>	0	\$13,000	\$28,000	\$48,000
	1		\$17,000	\$33,000
	2			\$20,000

10.3-4

10.4-1b

10.4-2

For 10.4-1b and 10.4-2, list the arcs in the spanning tree in the order you find them. For 10.4-1b, you can visually scan the whole network, so it is easy to do Kruskal). For 10.4-2, it may be easier to work via Prim, starting with the [7,8], the shortest arc. Circle column numbers as nodes get added to the tree, and cross out the corresponding rows so you don't reconnect to them. Scan connected columns to find the next arc.