Practice worksheet | Networks, scheduling and assignment

Hungarian algorithm

Name: _____ Date: _____

6 questions | 17 marks

1. For the matrix rows [8,5,7], [6,9,4], [3,7,6], perform row reduction. [3 marks]

2. For the reduced matrix [3,0,2], [2,5,0], [0,4,3], is a further column reduction needed? Find a complete zero assignment. [2 marks]

3. Use the Amy/Ben/Cal table to show why two independent zeros are not enough for a complete allocation. [3 marks]

Times in hours for one person to perform one task.

Person	X	Y	Z
Amy	4	1	3
Ben	2	0	5
Cal	3	2	2

4. Zeros are covered by row 3 and column 2 in [2,0,2], [1,0,5], [0,0,0]. Carry out the adjustment. [4 marks]

5. For the original Amy/Ben/Cal table, compare the algorithm's 5-hour assignment with Amy→X, Ben→Y, Cal→Z. [2 marks]

Times in hours for one person to perform one task.

Person	X	Y	Z
Amy	4	1	3
Ben	2	0	5
Cal	3	2	2

6. A student draws one line through every row, covering all zeros in any 3×3 reduced matrix, and immediately stops. Explain the error. [3 marks]