Practice worksheet | Networks, scheduling and assignment

Minimum-cost and maximum-profit assignments

Name: _____ Date: _____

6 questions | 14 marks

1. Form the opportunity-loss matrix for the supplied profits using K=19. [3 marks]

Profit ($100 units) from assigning each team to one distinct contract.

Team	Contract 1	Contract 2	Contract 3
P	18	14	13
Q	15	17	12
R	16	11	19

2. For a four-person problem with K=30, the minimum transformed total is 17. Find the maximum profit. [2 marks]

3. Two workers have profits A:[12,8] and B:[10,11]. Find the best complete assignment. [2 marks]

4. For costs A:[12,8] and B:[10,11], find the minimum assignment and compare it with the previous profit objective. [2 marks]

5. If 5 is added to every profit in a three-person square table, does the optimal pairing change? What happens to its total? [2 marks]

6. An assignment gives predicted profits $700, $900 and $600, but the last two contracts compete for the same machine. Explain why adding them may overstate the achievable profit. [3 marks]