

### Assigning Engineers

A small engineering firm has 4 senior designers available to work on the firm's 4 current projects over the next 2 weeks. The firm's manager has developed the following table of quality scores, which show each designer's design quality on each type of project, on a scale of 100. Also shown is an estimate of the time (in hours) required for each project.

Designer	Project			
	1	2	3	4
1	90	80	25	50
2	60	70	50	65
3	70	40	80	85
4	65	55	60	75
Time	70	50	85	35

- Assume that one designer is assigned to each project. What assignment of designers to projects maximizes the sum of the quality scores assigned?
- Suppose that each designer has 80 hours available over the next two weeks. Assuming that more than one designer can work on a project, what assignment schedule maximizes the sum of quality scores assigned?

Source of this problem: Question 6 of Chapter 10 "Optimization of Network Models" of book "Business Analytics: The Art of Modeling with Spreadsheets", by Stephen G. Powell and Kenneth R. Baker, 5 th Edition, 2017, John Wiley and Sons.