Company ACC Cement produces two grades of cement (OPC 43 and OPC 53) which have different compression strength and used for different structures. Usually 53 grade is used for RCC and higher strength structures like concrete bridges, runways RCC works etc. and whereas the 43 grade is used block work, wall plastering works and Non-RCC works. Majorly silica is used as the main component along with other components. They have 2 types, 110,000 lb of Silica 5 and 250,000 lb 9 grade silica. The average quality for OPC43 must be at least 6 and average quality of OPC53 must be at least 8. Each lb of grade 43 yields a revenue of $2.78 and incurs a variable cost (consisting of labour costs, variable overhead costs like crushing, mixing, inventory cost etc) of $1.05 dollars and whereas each lb of grade 53 yields a revenue of $3.24 dollars and incurs a variable cost of $1.25. Determine how company A could maximise it’s profit.

1. Use the LP spreadsheet model for finding the revenue-maximizing plan that meets quality constraints and stays within limits on silica availabilities.