

# Decision Sciences

## Exercise Linear Programming - Floataway Tours problem

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### Problem description

Floataway Tours has € 420,000 that may be used to purchase new rental boats for hiring during the summer. The boats can be purchased from two different manufacturers, Sleekboat and Racer.

Floataway Tours would like to purchase at least 50 boats and would like to purchase the same number from Sleekboat as from Racer to maintain goodwill. At the same time, Floataway Tours wishes to have a total seating capacity of at least 200.

Data concerning the boats are summarized in the following table:

**Table: Input data for boats**

Boat	Builder	Cost	Maximum seating	Expected daily profit
Speedhawk	Sleekboat	6,000 €	3	70 €
Silverbird	Sleekboat	7,000 €	5	80 €
Catman	Racer	5,000 €	2	50 €
Classy	Racer	9,000 €	6	110 €

- Formulate a model in Excel. Discuss the variables and the constraints. Solve your model and discuss the results.
- Analyze the sensitivity report.