Decision Sciences

Exercise Integer Programming - Capital budgeting problem

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Problem description

The CRT Technologies company currently has €250,000 available to invest in new projects. It has budgeted €75,000 for continued support for these projects in year 2 and €50,000 per year for years 3, 4, and 5.

Table: TODO

Project	Expected npv	Capital (in € 000) required in				
	(in € 000)	Y1	Y2	Y3	Y4	Y5
1	141	75	25	20	15	10
2	187	90	35	0	0	30
3	121	60	15	15	15	15
4	83	30	20	10	5	5
5	265	100	25	20	20	20
6	127	50	20	10	30	40

a) Formulate an integer program for CRT Technologies.

b) Solve your model and discuss the results.