

LINDO output, in-class example for Section 6.7

Suppose we have the following LP.

$$\begin{aligned} \max z = & 2x_1 - x_2 \\ \text{st} \quad & x_1 - x_2 \leq 1 \\ & 2x_1 + x_2 \leq 6 \\ & x_1, x_2 \geq 0 \end{aligned}$$

The LINDO output is:

LP OPTIMUM FOUND AT STEP 2

OBJECTIVE FUNCTION VALUE

1) 3.333333

VARIABLE	VALUE	REDUCED COST
X1	2.333333	0.000000
X2	1.333333	0.000000

ROW	SLACK OR SURPLUS	DUAL PRICES
2)	0.000000	1.333333
3)	0.000000	0.333333

NO. ITERATIONS= 2

RANGES IN WHICH THE BASIS IS UNCHANGED:

VARIABLE	OBJ COEFFICIENT RANGES		
	CURRENT COEF	ALLOWABLE INCREASE	ALLOWABLE DECREASE
X1	2.000000	INFINITY	1.000000
X2	-1.000000	2.000000	1.000000

ROW	RIGHTHAND SIDE RANGES		
	CURRENT RHS	ALLOWABLE INCREASE	ALLOWABLE DECREASE
2	1.000000	2.000000	7.000000
3	6.000000	INFINITY	4.000000