UNBOUNDED SOLUTION

IF IN SOME LP FORMULATION ONE OR MORE VARIABLE CAN BE INCREASED INDEFINITELY THEN THE OBJECTIVE FUNCTION VALUE MAY INCREASE (OR DECREASE) INDEFINITELY. IN SUCH CASES WE SAY THAT THE PROBLEM IS UNBOUNDED.
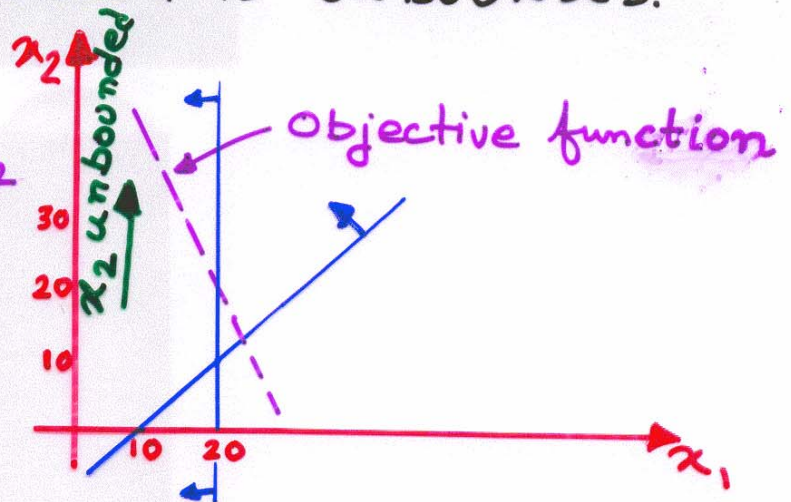
EXAMPLE

MAX $Z = 2x_1 + x_2$

s.t.

$$x_1 - x_2 \leq 10$$
$$2x_1 \leq 40$$
$$x_1, x_2 \geq 0$$

BASIC	x_1	x_2	S_1	S_2	SOLUTION
Z	-2	-1	0	0	0
S_1	1	-1	1	0	10
S_2	2	0	0	1	40

NO POSITIVE COEFFICIENT INDICATES x_2 CAN BE INCREASED INDEFINITELY.

LP-X