Find a solution to the following goal programming problem, by solving a Lexico-
graphic linear programming problem. Assume that Goal 1 is of more importance to the
decision-maker than Goal 2. Show all working.

Goal 1: $2x_1 + x_2 \geq 14$
Goal 2: $x_1 - x_2 \geq 6$
s.t. $x_1 + x_2 \leq 10$
     $x_1, x_2 \geq 0$