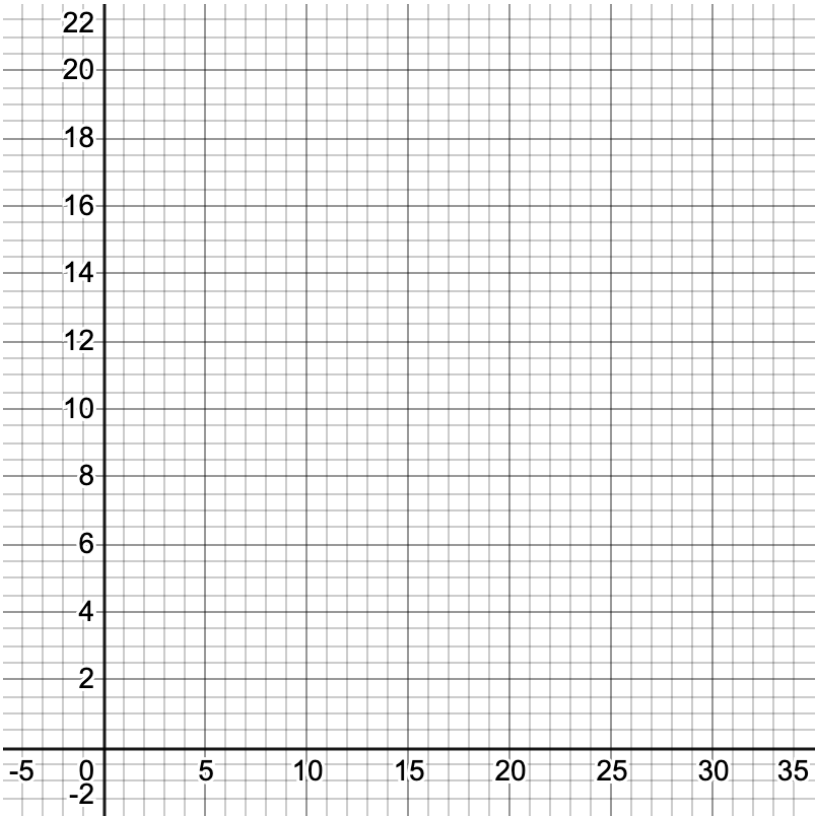
§3.3 (part 2): Unbounded and Infeasible Solutions

1.] Determine the optimal solution, if possible, to the LP below by sketching the feasible space on the graph provided.

$$\begin{aligned} \text{Maximize:} \quad & z = 2x + y \\ \\ \text{Subject to:} \quad & x - y \leq 10 \\ & 2x \leq 40 \\ & x, y \geq 0 \end{aligned}$$



2.] Determine the optimal solution, if possible, to the LP below by sketching the feasible space on the graph provided.

$$\begin{aligned} \text{Maximize:} \quad & z = 3x + 2y \\ \text{Subject to:} \quad & 2x + y \leq 2 \\ & 3x + 4y \geq 12 \\ & x, y \geq 0 \end{aligned}$$