

In Exercises 13–22, sketch the region determined by the constraints. Then find the minimum and maximum values of the objective function and where they occur, subject to the indicated constraints.

13. Objective function:

$$z = 6x + 10y$$

Constraints:

$$x \geq 0$$

$$y \geq 0$$

$$2x + 5y \leq 10$$

15. Objective function:

$$z = 3x + 4y$$

Constraints:

$$x \geq 0$$

$$y \geq 0$$

$$2x + 5y \leq 50$$

$$4x + y \leq 28$$