

Let 3" sockets = x

9" sockets = y

Maximize $Z = 2x + 4.5y$

subject to:

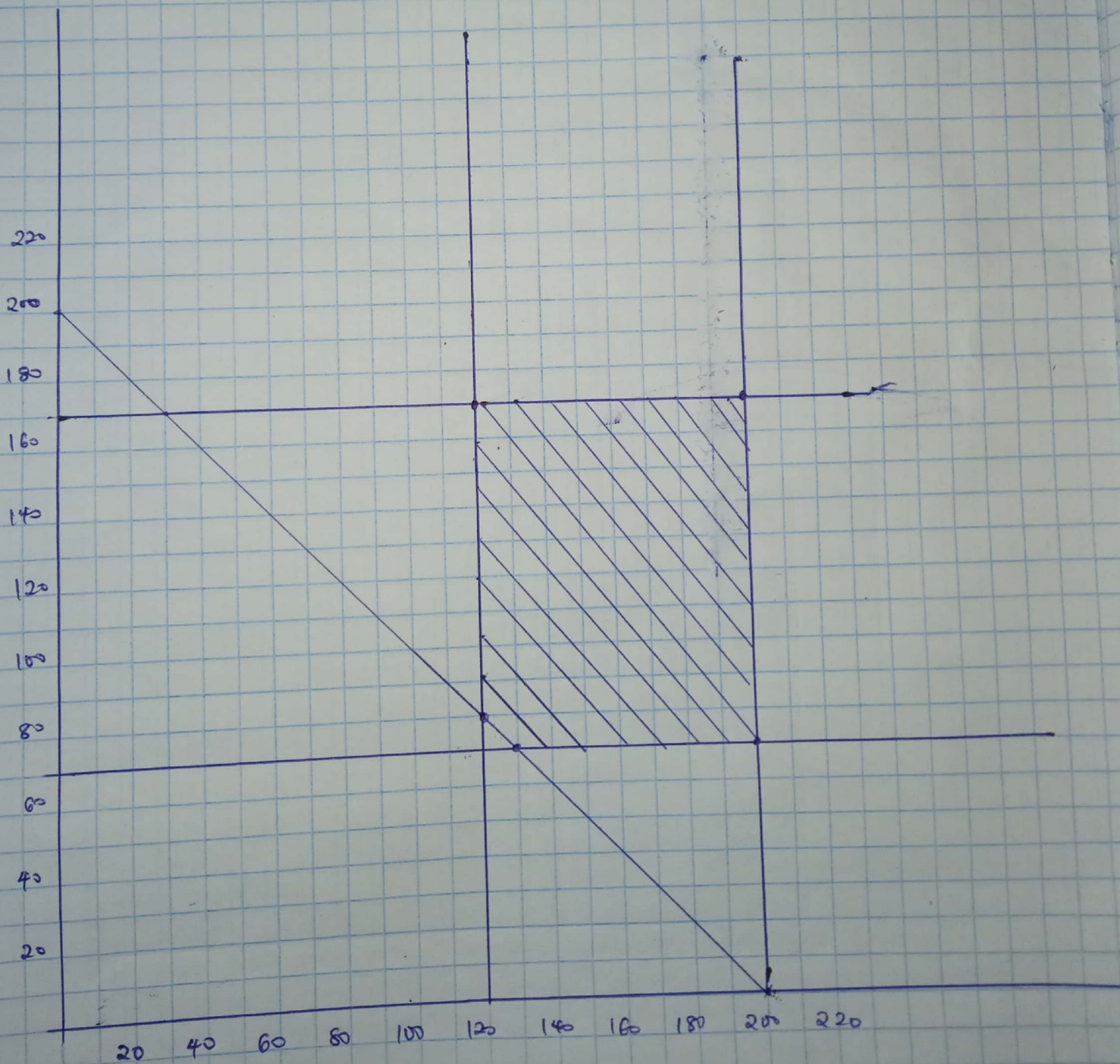
$$x \geq 120$$

$$y \geq 70$$

$$x \leq 200$$

$$y \leq 170$$

$$x + y \geq 200$$



Corner points
(120, 80)

$$Z = 2x + 4.5y$$
$$Z = 680$$

(130, 70)

$$Z = 575$$

(120, 170)

$$Z = 1005$$

(200, 170)

$$Z = 1165$$

(200, 70)

$$Z = 715$$

Maximum profit = \$ 1165

3" sockets = 200

9" sockets = 170