

$$P_0: x_1 = 3.75, x_2 = 2.25$$
$$S = 41.25$$

$$x_1 \leq 3$$

$$x_1 \geq 4$$

$$P_1: x_1 = 3, x_2 = 3$$
$$S = 39.0$$

$$P_2: x_1 = 4, x_2 = 1.8$$
$$S = 41$$

$$x_2 \leq 1$$

$$x_2 \geq 2$$

$$P_{21}: x_1 = 4.44, x_2 = 1$$
$$S = 40.56$$

Infeasible

$$x_1 \leq 4$$

$$x_1 \geq 5$$

$$P_{211}: x_1 = 4, x_2 = 1$$
$$S = 37$$

$$P_{212}: x_1 = 5, x_2 = 0$$
$$S = 40$$

Answer