

LP ②

SECRETARIES VS CLERKS & SOLN

FEASIBLE REGION SHAPED

$$\min C = 11x_1 + 5x_2$$

$$8x_1 + 4x_2 \geq 320$$

$$20x_1 + 40x_2 \geq 2600$$

$$x_1 \geq 0, x_2 \geq 0$$

LEVEL LINES ARE NOT NEEDED IN THE SOLN, JUST WORK OUT C AT CORNER POINTS, CHOOSE MINIMUM.

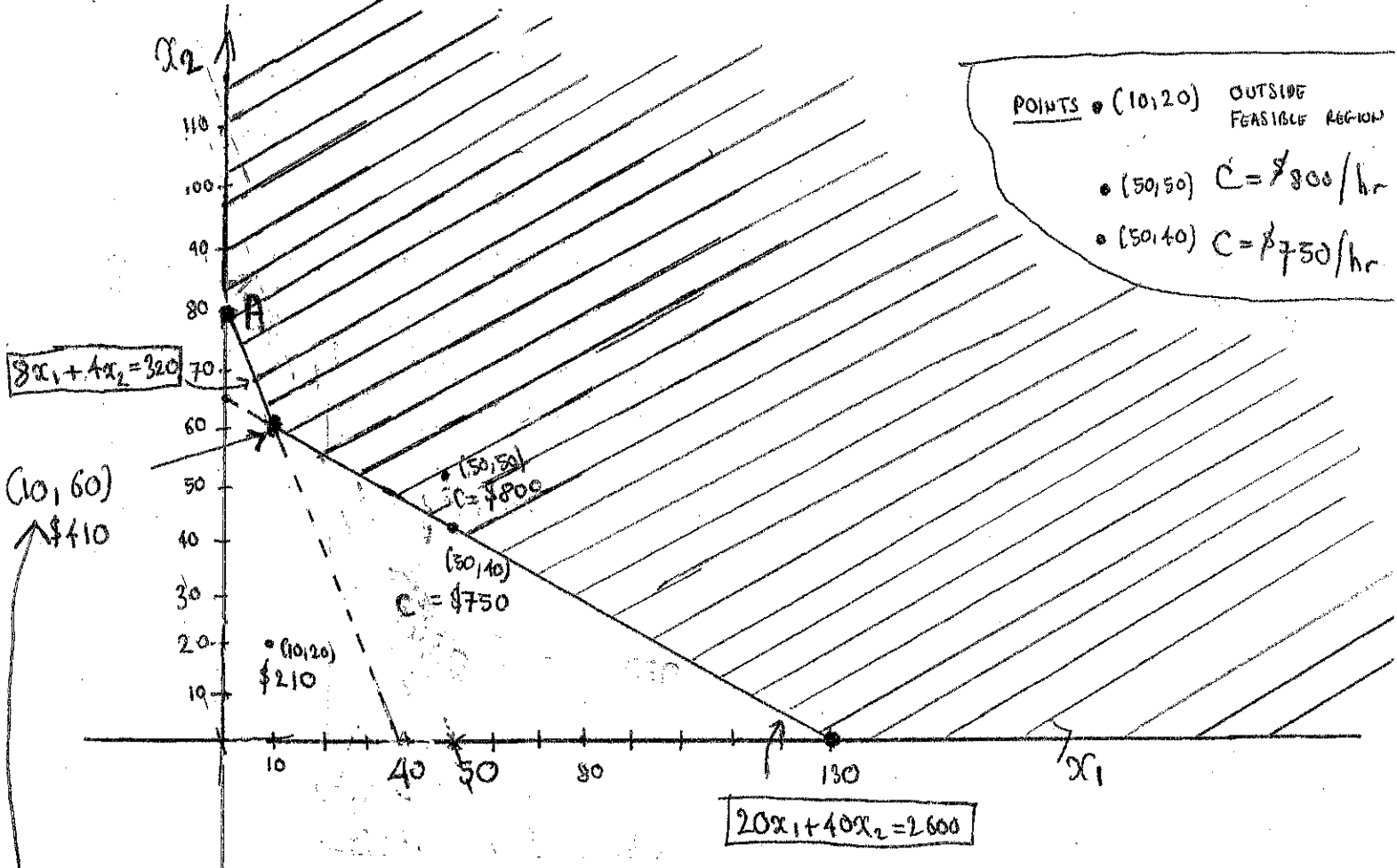
$$8x_1 + 4x_2 = 320$$

(40, 0)
(0, 80)

$$20x_1 + 40x_2 = 2600$$

(130, 0)
(0, 65)

(UNBOUNDED FEASIBLE REGION)



POINTS • (10, 20) OUTSIDE FEASIBLE REGION
• (50, 50) C = \$800/hr
• (50, 40) C = \$750/hr

(10, 60)
\$410

SYSTEM
 $8x_1 + 4x_2 = 320$
 $20x_1 + 40x_2 = 2600$
 SOLN: (10, 60)

VERTEX	$C = 11x_1 + 5x_2$
(0, 80)	400
(10, 60)	410
(130, 0)	1430

SO MIN OCCURS AT (0, 80),
 COST VALUE: \$400/HR. POINT A
 (BEST TO EMPLOY 80 CLERKS)