(3) $500 = 3x_1 \cdot x_2$

$P_1 = 20$

$P_2 = 8$

$C = ?$

$500 - 3x_1x_2 = 0$

$c = 20x_1 + 8x_2$

$Z = 20x_1 + 8x_2 + \lambda(500 - 3x_1x_2)$

$\frac{dZ}{dx_1} = 20 - \lambda 3x_2 \Rightarrow \frac{20}{3x_2}$

$\frac{dZ}{dx_2} = 8 - \lambda 3x_1 \Rightarrow \frac{8}{3x_1}$

$\frac{dZ}{d\lambda} = 500 - 3x_1x_2 = 0$

$\frac{20}{3x_2} = \frac{8}{3x_1}$

$60x_1 = 24x_2$

$x_1 = \frac{24x_2}{60}$

$x_1 = 0,4x_2$ //

$500 - 3(0,4x_2)x_2 = 0$

$500 = 1,2x_2^2$

$\frac{500}{1,2} = x_2^2$

$\sqrt{416,67} = \sqrt{x_2^2}$

$x_2 = 20,41$ //

$x_1 = 0,4(20,41)$

$x_1 = 8,16$ //

$c = 20(8,16) + 8(20,41)$

$c = 163,20 + 163,28 = 326,48$ //