(4, 3)

$$\text{Max } Z = 5x1 + 2x2$$

s.a

$$x1 \leq 3 \quad (I)$$
$$x2 \leq 4 \quad (II)$$
$$x1 + 2x2 \leq 9 \quad (III)$$
$$x1, x2 \geq 0.$$

Pegamos somente a parte

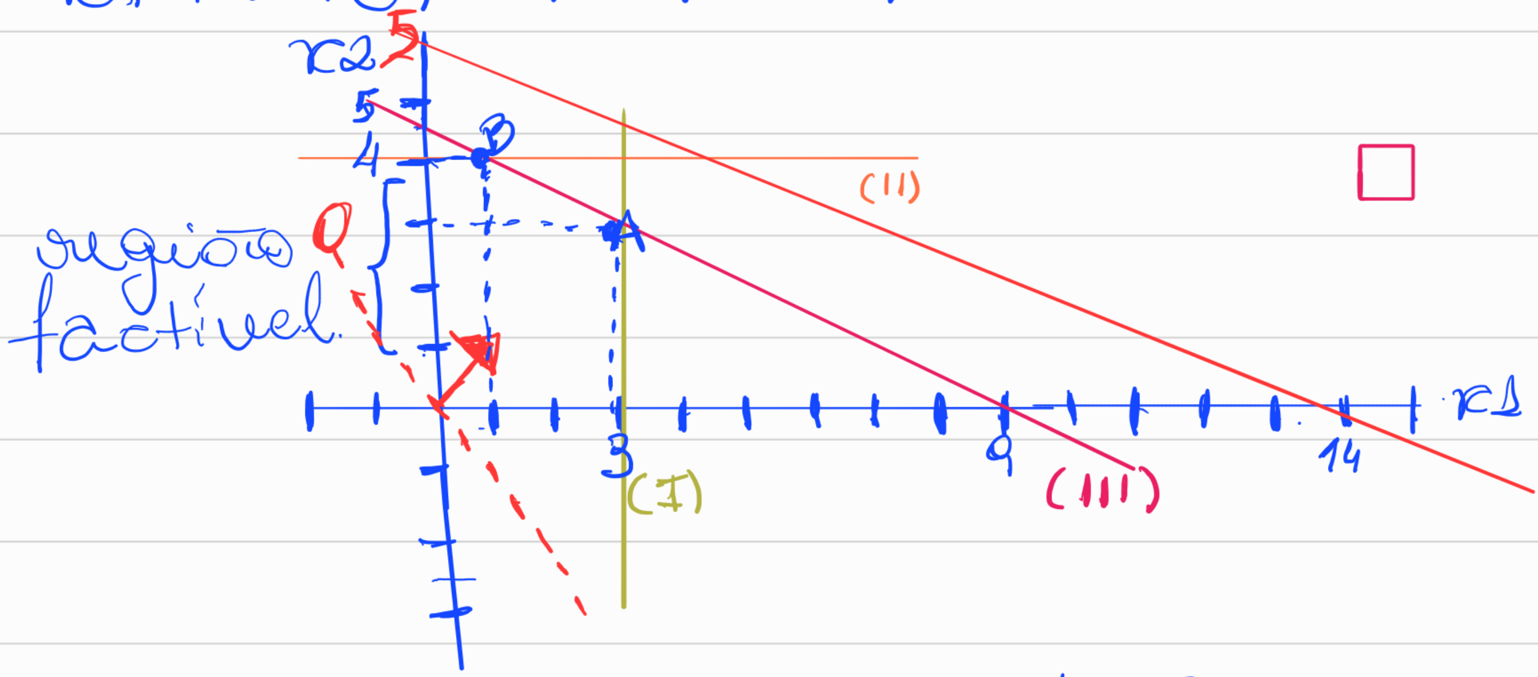
= do restrição I e II

$x1 = 3$ $\qquad$ $x2 = 4$

$x1 + 2x2 = 9$ $\qquad \rightarrow (0, 4.5)$

$0 + 2x2 = 9 = \frac{9}{2} = 4,5 \quad (9, 0)$

$x1 + 2(0) = 9 = x1 = 9$



x1 x2

$(0, 0) = 0.$

$(1, -2.5) = 0.$

$5x1 + 2x2 = 3$

$5(0) + 2(0) = 0$

$5(1) + 2x2 = 0.$

$x2 = \frac{-5}{2}$

$x2 = -2,5$

$\nabla f [5, 2]$

$f(5,2) = 5(5) + 2(2) = 29$

$5(0) + 2x_2 = 29$
$x_2 = 29 \div 2$
$x_2 = 14.5$

$(0, 14.5) = 29$
$(5.8, 0) = 29$

$5x_1 + 2(0) = 29$
$x_1 = 29/5$
$x_1 \cong 5.8$

Descobrindo o valor objetivo

$x_1 = 3 \quad (I)$
$x_1 + 2x_2 = 9 \quad (III)$

$3 + 2x_2 = 9$
$2x_2 = 9 - 3$
$x_2 = 6/2$
$x_2 = 3$

$A = (3, 3)$

$x_2 = 4 \quad (II)$
$x_1 + 2x_2 = 9$
$x_1 + 2(4) = 9$
$x_1 = 9 - 8$
$x_1 = 1$

$B(1, 4)$

$A = (3,3)$	$B(1,4)$
$Z = 5x_1 + 2x_2$	$Z = 5(1) + 2(4)$
$Z = 5(3) + 2(3)$	$Z = 13$
$Z = 21$	

melhor valor dado pelo ponto $A = (3,3) = 21$.