

EX 2.3.3 - PAG 34

$$\text{MINIMIZE } W = -4x_1 - 8x_2 \quad (1) \quad \textcircled{1}$$

$$\text{s.t. } 3x_1 + 2x_2 \leq 18 \quad \textcircled{2}$$

$$x_1 + x_2 \leq 5 \quad \textcircled{3}$$

$$x_1 \leq 4 \quad \textcircled{4}$$

$$x_1, x_2 \geq 0$$

1ª: PASSAR PARA A FORMA PADRÃO.

$$\text{MAXIMIZE } -W = +4x_1 + 8x_2$$

$$W + 4x_1 + 8x_2 = 0$$

$$3x_1 + 2x_2 + x_{t1} = 18$$

$$x_1 + x_2 + x_{t2} = 5$$

$$x_1 + x_{t3} = 4$$

2ª: COLOCAR NA TABELA DO SIMPLEX.

BASE	x_1	x_2	x_{t1}	x_{t2}	x_{t3}	RHS	
x_{t1}	3	2	1	0	0	18	$\frac{18}{2} = 9$
x_{t2}	1	1	0	1	0	5	$\frac{5}{1} = 5$
x_{t3}	1	0	0	0	1	4	$\frac{4}{1} = 4$
W	4	8	0	0	0	0	

3ª: FAZER AS ITERAÇÕES.

BASE	x_1	x_2	x_{t1}	x_{t2}	x_{t3}	RHS
x_{t1}	1	0	1	-2	0	8
x_{t2}	1	1	0	1	0	5
x_{t3}	1	0	0	0	1	4
W	-4	0	0	-8	0	-40

$$\text{RESPOSTA: } x_{t1} = 8 \quad x_{t3} = 4 \quad x_1 = 0$$

$$x_2 = 5 \quad W = -40 \quad x_{t2} = 0$$