Primal:

Min $z = 7x_1 + 3x_2$

s.a: $9x_1 + 14x_2 \geq 21$

$6x_1 - 12x_2 \geq 42$

$x_1, x_2 \geq 0$

Dual:

Max $z = 21y_1 + 42y_2$

s.a: $9y_1 + 6y_2 \leq 7$

$14y_1 - 12y_2 \leq 3$

$9y_1 + 6y_2 + s_1 = 7$

$14y_1 - 12y_2 + s_2 = 3$

$z - 21y_1 - 42y_2 + 0s_1 + 0s_2 = 0$

	y_1	y_2	s_1	s_2	z	
z	-21	-42	0	0	0	$0/-42 =$
s_1	9	6	1	0	7	$7/6 > 0$ Pivote
s_2	14	-12	0	1	3	$3/-12$

Pivote

	y_1	y_2	s_1	s_2	z	
z	-21	-42	0	0	0	
y_2	3/2	1	1/6	0	7/6	$s_2/6$
s_2	14	-12	0	1	3	

	y_1	y_2	s_1	s_2	z	
z	42	0	7	0	49	$f_2(42) + f_1$
y_2	7/2	1	1/6	0	7/6	
s_2	32	0	2	1	17	$f_2(12) + f_3$

$y_1 = 0$

$y_2 = 7/6$

$z = 49$

$z = 21y_1 + 42y_2$

$49 = 21(0) + 42(7/6)$

$49 = 42(7/6)$

$49 = 49$ ✓

Primera Restricion primal

$9x_1 + 14x_2 \geq 21$

$(9x_1 + 14x - 21)y_1 = 0$

$(9x_1 + 14x_2 - 21)(0) = 0$

$x_2 = 0$

Segunda Restriccion Primal

$6x_1 - 12x_2 \geq 42$

$(6x_1 - 12x_2 - 42)y_2 = 0$

$(6x_1 - 12x_2 - 42)(7/6) = 0$

$7x_1 - 14x_2 - 49 = 0$

$x_1 = \frac{14(0) + 49}{7} = 7$

z Primal

$z = 7x_1 + 3x_2$

$49 = 7(7) + 3(0)$

$49 = 49$

R// x_1 debe ser 1 y x_2 sea 0 para minimizar el Problema.