

§4.6: SIMPLEX ALGORITHM FOR MINIMIZATION LPS

1.] Solve the following two-variable LP problem using the Simplex Method:

$$\text{Minimize:} \quad z = 4x_1 - x_2$$

$$\text{Subject to:} \quad 2x_1 + x_2 \leq 8$$

$$x_2 \leq 5$$

$$x_1 - x_2 \leq 4$$

$$x_1, x_2 \geq 0$$

Row	Basic		RHS
0	$-z$		
1			
2			
3			

Row	Basic		RHS
0'	$-z$		
1'			
2'			
3'			

2.] Solve the following two-variable LP problem using the Simplex Method:

$$\text{Minimize: } z = 2x_1 - 5x_2$$

$$\text{Subject to: } 3x_1 + 8x_2 \leq 12$$

$$2x_1 + 3x_2 \leq 6$$

$$x_1, x_2 \geq 0$$

Row	Basic		RHS
0	z		
1			
2			

Row	Basic		RHS
0'	z		
1'			
2'			