

Símplex

Operations Research

Daniel Herrera
2015130539

Edisson López
2013103311

Alonso Rivas
2014079916

Tecnológico de Costa Rica
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Algoritmo Símplex

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Tabla inicial

Z	x₁	x₂	x₃	s₁	s₂	s₃	s₄	•
1.0	-60.0	-35.0	-20.0	0	0	0	0	0
0.0	8.0	6.0	1.0	1.0	0.0	0.0	0.0	48.0
0.0	4.0	2.0	1.5	0.0	1.0	0.0	0.0	20.0
0.0	2.0	1.5	0.5	0.0	0.0	1.0	0.0	8.0
0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	5.0

Cuadro 1: Tabla inicial.

Tabla intermedia #1

Z	x₁	x₂	x₃	s₁	s₂	s₃	s₄	•
1.0	-60.0	-35.0	-20.0	0	0	0	0	0
0.0	8.0	6.0	1.0	1.0	0.0	0.0	0.0	48.0
0.0	4.0	2.0	1.5	0.0	1.0	0.0	0.0	20.0
0.0	2.0	1.5	0.5	0.0	0.0	1.0	0.0	8.0
0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	5.0

Cuadro 2: Tabla intermedia 1, durante el pivoteo.

Tabla intermedia #2

Z	x_1	x_2	x_3	s_1	s_2	s_3	s_4	•
1.0	0	10.0	-5.0	0	0	30.0	0	240.0
0.0	0.0	0.0	-1.0	1.0	0.0	-4.0	0.0	16.0
0.0	0.0	-1.0	0.5	0.0	1.0	-2.0	0.0	4.0
0.0	1.0	0.8	0.2	0.0	0.0	0.5	0.0	4.0
0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	5.0

Cuadro 3: Tabla intermedia 2, con la columna de 2 canonizada.

Tabla intermedia #2

Z	x₁	x₂	x₃	s₁	s₂	s₃	s₄	•
1.0	0	10.0	-5.0	0	0	30.0	0	240.0
0.0	0.0	0.0	-1.0	1.0	0.0	-4.0	0.0	16.0
0.0	0.0	-1.0	0.5	0.0	1.0	-2.0	0.0	4.0
0.0	1.0	0.8	0.2	0.0	0.0	0.5	0.0	4.0
0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	5.0

Cuadro 4: Tabla intermedia 2, durante el pivoteo.

Tabla intermedia #3

Z	x_1	x_2	x_3	s_1	s_2	s_3	s_4	•
1.0	0	0	0	0	10.0	10.0	0	280.0
0.0	0.0	-2.0	0.0	1.0	2.0	-8.0	0.0	24.0
0.0	0.0	-2.0	1.0	0.0	2.0	-4.0	0.0	8.0
0.0	1.0	1.2	0.0	0.0	-0.5	1.5	0.0	2.0
0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	5.0

Cuadro 5: Tabla intermedia 3, con la columna de 4 canonizada.

Tabla final

Z	x₁	x₂	x₃	s₁	s₂	s₃	s₄	•
1.0	0	0	0	0	10.0	10.0	0	280.0
0.0	0.0	-2.0	0.0	1.0	2.0	-8.0	0.0	24.0
0.0	0.0	-2.0	1.0	0.0	2.0	-4.0	0.0	8.0
0.0	1.0	1.2	0.0	0.0	-0.5	1.5	0.0	2.0
0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	5.0

Cuadro 6: Tabla final.