

Example 2: Cycling (Exercise 3, p. 172)

	x_1	x_2	x_3	x_4	s_1	s_2	RHS
	-2	-3	1	12	0	0	0
s_1	-2	-9	1	9	1	0	0
s_2	1/3	1	-1/3	-2	0	1	0

Initially we bring in x_2 as a BV, and replace s_2 .

	x_1	x_2	x_3	x_4	s_1	s_2	RHS
	-1	0	0	6	0	3	0
s_1	1	0	-2	-9	1	9	0
x_2	1/3	1	-1/3	-2	0	1	0

The BFS is now $(0, 0, 0, 0)$. Bring in x_1

	x_1	x_2	x_3	x_4	s_1	s_2	RHS
	0	0	-2	-3	1	12	0
x_1	1	0	-2	-9	1	9	0
x_2	0	1	1/3	1	-1/3	-2	0

The BFS is still $(0, 0, 0, 0)$ even after pivoting. Bring in x_4 :

	x_1	x_2	x_3	x_4	s_1	s_2	RHS
	0	3	-1	0	0	6	0
x_1	1	9	1	0	-2	-9	0
x_4	0	1	1/3	1	-1/3	-2	0

Now bring in x_3 :

	x_1	x_2	x_3	x_4	s_1	s_2	RHS
	1	12	0	0	-2	-3	0
x_3	1	9	1	0	-2	-9	0
x_4	-1/3	-2	0	1	1/3	1	0

Continuing, now s_2 comes back in:

	x_1	x_2	x_3	x_4	s_1	s_2	RHS
	0	6	0	3	-1	0	0
x_3	-2	-9	1	9	1	0	0
s_2	-1/3	-2	0	1	1/3	1	0

And finally s_1 comes back in:

	x_1	x_2	x_3	x_4	s_1	s_2	RHS
	-2	-3	1	12	0	0	0
s_1	-2	-9	1	9	1	0	0
s_2	1/3	1	-1/3	-2	0	1	0

And we're back where we started!