

① Consider the following simplex tableau:

	x_0	x_1	x_2	x_3	x_4	x_5	x_6
	2	-2	-3	1	12	0	0
$x_5 =$	0	-2	-9	1	9	1	0
$x_6 =$	0	$\frac{1}{3}$	1	$-\frac{1}{3}$	-2	0	1

(a) Apply the simplex tableau method with the following rules:

- the non-basic variable with the most negative cost enters the basis, and
- in case of ties for the leaving variable, choose the row that is higher up in the tableau as the pivot row.

Demonstrate that the simplex method cycles.

(b) Apply the simplex method with either Bland's rule or with Lexicographic pivoting rule, and demonstrate that the simplex method does not cycle.

② BT 3.4

③ BT 3.18a b

④ BT 3.19

⑤ One of the following: BT 3.12 or BT 3.21a