

Table # initial

pots:  
pot #0:  
new:  
symbol  $b_1 : (0, \infty)$   
symbol  $b_2 : (0, \infty)$   
all:  
symbol  $b_1 : (0, \infty)$   
symbol  $b_2 : (0, \infty)$

		$x_0$	$x_1$	$x_2$	$x_3$
$x_2$	$b_1$	$a_{11}$	$a_{12}$	1	0
$x_3$	$b_2$	$a_{21}$	$a_{22}$	0	1
$\Psi$	0	$c_1$	$c_2$	0	0

Table #0

Moving out basis:  $x_2$  from line: 0

Moving to basis:  $x_0$

pots:

pot #0:

new:

symbol  $c_1 : (-\infty, 0)$

symbol  $a_{11} : (0, \infty)$

symbol  $a_{21} : (0, \infty)$

$-c_1 + c_2 \geq 0$

$a_{11}b_2 - a_{21}b_1 > 0$

all:

symbol  $c_1 : (-\infty, 0)$

symbol  $a_{11} : (0, \infty)$

symbol  $b_1 : (0, \infty)$

symbol  $b_2 : (0, \infty)$

symbol  $a_{21} : (0, \infty)$

$-c_1 + c_2 \geq 0$

$a_{11}b_2 - a_{21}b_1 > 0$

pot #1:

new:

symbol  $c_1 : (-\infty, 0)$

symbol  $a_{11} : (0, \infty)$

symbol  $a_{21} : (-\infty, 0]$

$-c_1 + c_2 \geq 0$

all:

symbol  $a_{11} : (0, \infty)$

symbol  $c_1 : (-\infty, 0)$

symbol  $b_1 : (0, \infty)$

symbol  $b_2 : (0, \infty)$

symbol  $a_{21} : (-\infty, 0]$

$-c_1 + c_2 \geq 0$

		$x_0$	$x_1$	$x_2$	$x_3$
$x_0$	$\frac{b_1}{a_{11}}$	1	$\frac{a_{12}}{a_{11}}$	$\frac{1}{a_{11}}$	0
$x_3$	$b_2 - \frac{a_{21}b_1}{a_{11}}$	0	$a_{22} - \frac{a_{12}a_{21}}{a_{11}}$	$-\frac{a_{21}}{a_{11}}$	1
$\Psi$	$-\frac{b_1c_1}{a_{11}}$	0	$c_2 - \frac{a_{12}c_1}{a_{11}}$	$-\frac{c_1}{a_{11}}$	0

Table #0.0

Moving out basis:  $x_0$  from line: 0

Moving to basis:  $x_1$

pots:

pot #0:

new:

symbol  $a_{12} : (0, \infty)$

$-a_{11}c_2 + a_{12}c_1 > 0$

$a_{11}a_{22} - a_{12}a_{21} > 0$

$a_{12}b_2 - a_{22}b_1 > 0$

all:

symbol  $c_1 : (-\infty, 0)$

symbol  $a_{12} : (0, \infty)$

symbol  $b_1 : (0, \infty)$

symbol  $a_{11} : (0, \infty)$

symbol  $a_{21} : (0, \infty)$

symbol  $b_2 : (0, \infty)$

$-c_1 + c_2 \geq 0$

$a_{11}b_2 - a_{21}b_1 > 0$

$-a_{11}c_2 + a_{12}c_1 > 0$

$a_{11}a_{22} - a_{12}a_{21} > 0$

$a_{12}b_2 - a_{22}b_1 > 0$

pot #1:

new:

symbol  $a_{12} : (0, \infty)$

$-a_{11}c_2 + a_{12}c_1 > 0$

$-a_{11}a_{22} + a_{12}a_{21} \geq 0$

all:

symbol  $c_1 : (-\infty, 0)$

symbol  $a_{12} : (0, \infty)$

symbol  $b_1 : (0, \infty)$

symbol  $a_{11} : (0, \infty)$

symbol  $a_{21} : (0, \infty)$

symbol  $b_2 : (0, \infty)$

$-c_1 + c_2 \geq 0$

$a_{11}b_2 - a_{21}b_1 > 0$

$-a_{11}c_2 + a_{12}c_1 > 0$

$-a_{11}a_{22} + a_{12}a_{21} \geq 0$

pot #2:

new:

symbol  $a_{12} : (0, \infty)$

$-a_{11}c_2 + a_{12}c_1 > 0$

$a_{11}a_{22} - a_{12}a_{21} > 0$

$a_{12}b_2 - a_{22}b_1 > 0$

all:

symbol  $c_1 : (-\infty, 0)$

symbol  $a_{12} : (0, \infty)$

symbol  $b_1 : (0, \infty)$

symbol  $a_{11} : (0, \infty)$

symbol  $a_{21} : (-\infty, 0]$

symbol  $b_2 : (0, \infty)$

$$-c_1 + c_2 \geq 0$$

$$-a_{11}c_2 + a_{12}c_1 > 0$$

$$a_{11}a_{22} - a_{12}a_{21} > 0$$

$$a_{12}b_2 - a_{22}b_1 > 0$$

pot #3:

new:

symbol  $a_{12} : (0, \infty)$

$$-a_{11}c_2 + a_{12}c_1 > 0$$

$$-a_{11}a_{22} + a_{12}a_{21} \geq 0$$

all:

symbol  $c_1 : (-\infty, 0)$

symbol  $a_{12} : (0, \infty)$

symbol  $b_1 : (0, \infty)$

symbol  $a_{11} : (0, \infty)$

symbol  $a_{21} : (-\infty, 0]$

symbol  $b_2 : (0, \infty)$

$$-c_1 + c_2 \geq 0$$

$$-a_{11}c_2 + a_{12}c_1 > 0$$

$$-a_{11}a_{22} + a_{12}a_{21} \geq 0$$

		$x_0$	$x_1$	$x_2$	$x_3$
$x_1$	$\frac{b_1}{a_{12}}$	$\frac{a_{11}}{a_{12}}$	1	$\frac{1}{a_{12}}$	0
$x_3$	$b_2 - \frac{a_{22}b_1}{a_{12}}$	$-\frac{a_{11}a_{22}}{a_{12}} + a_{21}$	0	$-\frac{a_{22}}{a_{12}}$	1
$\Psi$	$-\frac{b_1c_2}{a_{12}}$	$-\frac{a_{11}c_2}{a_{12}} + c_1$	0	$-\frac{c_2}{a_{12}}$	0

Solution:

$$x_0 = 0$$

$$x_1 = \frac{b_1}{a_{12}}$$

$$x_2 = 0$$

$$x_3 = b_2 - \frac{a_{22}b_1}{a_{12}}$$

$$\Psi = -\frac{b_1c_2}{a_{12}}$$

Table #0.1

Moving out basis:  $x_3$  from line: 1

Moving to basis:  $x_1$

pots:

pot #0:

new:

symbol  $a_{12} : (0, \infty)$

$-a_{11}c_2 + a_{12}c_1 > 0$

$a_{11}a_{22} - a_{12}a_{21} > 0$

$-a_{12}b_2 + a_{22}b_1 \geq 0$

all:

symbol  $c_1 : (-\infty, 0)$

symbol  $a_{12} : (0, \infty)$

symbol  $b_1 : (0, \infty)$

symbol  $a_{11} : (0, \infty)$

symbol  $a_{21} : (0, \infty)$

symbol  $b_2 : (0, \infty)$

$-c_1 + c_2 \geq 0$

$a_{11}b_2 - a_{21}b_1 > 0$

$-a_{11}c_2 + a_{12}c_1 > 0$

$a_{11}a_{22} - a_{12}a_{21} > 0$

$-a_{12}b_2 + a_{22}b_1 \geq 0$

pot #1:

new:

symbol  $a_{12} : (-\infty, 0]$

$-a_{11}c_2 + a_{12}c_1 > 0$

$a_{11}a_{22} - a_{12}a_{21} > 0$

all:

symbol  $c_1 : (-\infty, 0)$

symbol  $a_{12} : (-\infty, 0]$

symbol  $b_1 : (0, \infty)$

symbol  $a_{11} : (0, \infty)$

symbol  $a_{21} : (0, \infty)$

symbol  $b_2 : (0, \infty)$

$-c_1 + c_2 \geq 0$

$a_{11}b_2 - a_{21}b_1 > 0$

$-a_{11}c_2 + a_{12}c_1 > 0$

$a_{11}a_{22} - a_{12}a_{21} > 0$

pot #2:

new:

symbol  $a_{12} : (0, \infty)$

$-a_{11}c_2 + a_{12}c_1 > 0$

$a_{11}a_{22} - a_{12}a_{21} > 0$

$-a_{12}b_2 + a_{22}b_1 \geq 0$

all:

symbol  $c_1 : (-\infty, 0)$

symbol  $a_{12} : (0, \infty)$

symbol  $b_1 : (0, \infty)$

symbol  $a_{11} : (0, \infty)$

symbol  $a_{21} : (-\infty, 0]$

symbol  $b_2 : (0, \infty)$

$$-c_1 + c_2 \geq 0$$

$$-a_{11}c_2 + a_{12}c_1 > 0$$

$$a_{11}a_{22} - a_{12}a_{21} > 0$$

$$-a_{12}b_2 + a_{22}b_1 \geq 0$$

pot #3:

new:

symbol  $a_{12} : (-\infty, 0]$

$$-a_{11}c_2 + a_{12}c_1 > 0$$

$$a_{11}a_{22} - a_{12}a_{21} > 0$$

all:

symbol  $c_1 : (-\infty, 0)$

symbol  $a_{12} : (-\infty, 0]$

symbol  $b_1 : (0, \infty)$

symbol  $a_{11} : (0, \infty)$

symbol  $a_{21} : (-\infty, 0]$

symbol  $b_2 : (0, \infty)$

$$-c_1 + c_2 \geq 0$$

$$-a_{11}c_2 + a_{12}c_1 > 0$$

$$a_{11}a_{22} - a_{12}a_{21} > 0$$

		$x_0$	$x_1$	$x_2$	$x_3$
$x_0$	$\frac{-a_{12}b_2+a_{22}b_1}{a_{11}a_{22}-a_{12}a_{21}}$	1	0	$\frac{a_{22}}{a_{11}a_{22}-a_{12}a_{21}}$	$-\frac{a_{12}}{a_{11}a_{22}-a_{12}a_{21}}$
$x_1$	$\frac{a_{11}b_2-a_{21}b_1}{a_{11}a_{22}-a_{12}a_{21}}$	0	1	$-\frac{a_{21}}{a_{11}a_{22}-a_{12}a_{21}}$	$\frac{a_{11}}{a_{11}a_{22}-a_{12}a_{21}}$
$\Psi$	$\frac{1}{a_{11}a_{22}-a_{12}a_{21}}(-a_{11}b_2c_2 + a_{12}b_2c_1 + a_{21}b_1c_2 - a_{22}b_1c_1)$	0	0	$\frac{a_{21}c_2-a_{22}c_1}{a_{11}a_{22}-a_{12}a_{21}}$	$\frac{-a_{11}c_2+a_{12}c_1}{a_{11}a_{22}-a_{12}a_{21}}$

Table #0.1.0

Moving out basis:  $x_0$  from line: 0

Moving to basis:  $x_2$

pots:

pot #0:

new:

symbol  $a_{22} : (0, \infty)$

$-a_{21}c_2 + a_{22}c_1 > 0$

all:

symbol  $c_1 : (-\infty, 0)$

symbol  $a_{12} : (0, \infty)$

symbol  $b_1 : (0, \infty)$

symbol  $a_{22} : (0, \infty)$

symbol  $a_{11} : (0, \infty)$

symbol  $a_{21} : (0, \infty)$

symbol  $b_2 : (0, \infty)$

$-c_1 + c_2 \geq 0$

$a_{11}b_2 - a_{21}b_1 > 0$

$-a_{11}c_2 + a_{12}c_1 > 0$

$a_{11}a_{22} - a_{12}a_{21} > 0$

$-a_{12}b_2 + a_{22}b_1 \geq 0$

$-a_{21}c_2 + a_{22}c_1 > 0$

pot #1:

new:

symbol  $a_{22} : (0, \infty)$

$-a_{21}c_2 + a_{22}c_1 > 0$

all:

symbol  $c_1 : (-\infty, 0)$

symbol  $a_{12} : (-\infty, 0]$

symbol  $b_1 : (0, \infty)$

symbol  $a_{22} : (0, \infty)$

symbol  $a_{11} : (0, \infty)$

symbol  $a_{21} : (0, \infty)$

symbol  $b_2 : (0, \infty)$

$-c_1 + c_2 \geq 0$

$a_{11}b_2 - a_{21}b_1 > 0$

$-a_{11}c_2 + a_{12}c_1 > 0$

$a_{11}a_{22} - a_{12}a_{21} > 0$

$-a_{21}c_2 + a_{22}c_1 > 0$

		$x_0$	$x_1$	$x_2$	$x_3$
$x_2$	$-\frac{a_{12}b_2}{a_{22}} + b_1$	$a_{11} - \frac{a_{12}a_{21}}{a_{22}}$	0	1	$-\frac{a_{12}}{a_{22}}$
$x_1$	$\frac{b_2}{a_{22}}$	$\frac{a_{21}}{a_{22}}$	1	0	$\frac{1}{a_{22}}$
$\Psi$	$-\frac{b_2c_2}{a_{22}}$	$-\frac{a_{21}c_2}{a_{22}} + c_1$	0	0	$-\frac{c_2}{a_{22}}$

Solution:

$x_0 = 0$

$x_1 = \frac{b_2}{a_{22}}$

$x_2 = -\frac{a_{12}b_2}{a_{22}} + b_1$

$$x_3 = 0$$

$$\Psi = -\frac{b_2c_2}{a_{22}}$$



# Table #0.1.-1

pots:

pot #0:

new:

$$a_{21}c_2 - a_{22}c_1 \geq 0$$

all:

symbol  $c_1 : (-\infty, 0)$

symbol  $a_{12} : (0, \infty)$

symbol  $b_1 : (0, \infty)$

symbol  $a_{11} : (0, \infty)$

symbol  $a_{21} : (0, \infty)$

symbol  $b_2 : (0, \infty)$

$$-c_1 + c_2 \geq 0$$

$$a_{11}b_2 - a_{21}b_1 > 0$$

$$-a_{11}c_2 + a_{12}c_1 > 0$$

$$a_{11}a_{22} - a_{12}a_{21} > 0$$

$$-a_{12}b_2 + a_{22}b_1 \geq 0$$

$$a_{21}c_2 - a_{22}c_1 \geq 0$$

pot #1:

new:

$$a_{21}c_2 - a_{22}c_1 \geq 0$$

all:

symbol  $c_1 : (-\infty, 0)$

symbol  $a_{12} : (-\infty, 0]$

symbol  $b_1 : (0, \infty)$

symbol  $a_{11} : (0, \infty)$

symbol  $a_{21} : (0, \infty)$

symbol  $b_2 : (0, \infty)$

$$-c_1 + c_2 \geq 0$$

$$a_{11}b_2 - a_{21}b_1 > 0$$

$$-a_{11}c_2 + a_{12}c_1 > 0$$

$$a_{11}a_{22} - a_{12}a_{21} > 0$$

$$a_{21}c_2 - a_{22}c_1 \geq 0$$

pot #2:

new:

$$a_{21}c_2 - a_{22}c_1 \geq 0$$

all:

symbol  $c_1 : (-\infty, 0)$

symbol  $a_{12} : (0, \infty)$

symbol  $b_1 : (0, \infty)$

symbol  $a_{11} : (0, \infty)$

symbol  $a_{21} : (-\infty, 0]$

symbol  $b_2 : (0, \infty)$

$$-c_1 + c_2 \geq 0$$

$$-a_{11}c_2 + a_{12}c_1 > 0$$

$$a_{11}a_{22} - a_{12}a_{21} > 0$$

$$-a_{12}b_2 + a_{22}b_1 \geq 0$$

$$a_{21}c_2 - a_{22}c_1 \geq 0$$

pot #3:

new:

$$a_{21}c_2 - a_{22}c_1 \geq 0$$

all:

symbol  $c_1 : (-\infty, 0)$

symbol  $a_{12} : (-\infty, 0]$

symbol  $b_1 : (0, \infty)$

symbol  $a_{11} : (0, \infty)$

symbol  $a_{21} : (-\infty, 0]$

symbol  $b_2 : (0, \infty)$

$$-c_1 + c_2 \geq 0$$

$$-a_{11}c_2 + a_{12}c_1 > 0$$

$$a_{11}a_{22} - a_{12}a_{21} > 0$$

$$a_{21}c_2 - a_{22}c_1 \geq 0$$

		$x_0$	$x_1$	$x_2$	$x_3$
$x_0$	$\frac{-a_{12}b_2+a_{22}b_1}{a_{11}a_{22}-a_{12}a_{21}}$	1	0	$\frac{a_{22}}{a_{11}a_{22}-a_{12}a_{21}}$	$-\frac{a_{12}}{a_{11}a_{22}-a_{12}a_{21}}$
$x_1$	$\frac{a_{11}b_2-a_{21}b_1}{a_{11}a_{22}-a_{12}a_{21}}$	0	1	$-\frac{a_{21}}{a_{11}a_{22}-a_{12}a_{21}}$	$\frac{a_{11}}{a_{11}a_{22}-a_{12}a_{21}}$
$\Psi$	$\frac{1}{a_{11}a_{22}-a_{12}a_{21}}(-a_{11}b_2c_2 + a_{12}b_2c_1 + a_{21}b_1c_2 - a_{22}b_1c_1)$	0	0	$\frac{a_{21}c_2-a_{22}c_1}{a_{11}a_{22}-a_{12}a_{21}}$	$\frac{-a_{11}c_2+a_{12}c_1}{a_{11}a_{22}-a_{12}a_{21}}$

Solution:

$$x_0 = \frac{-a_{12}b_2+a_{22}b_1}{a_{11}a_{22}-a_{12}a_{21}}$$

$$x_1 = \frac{a_{11}b_2-a_{21}b_1}{a_{11}a_{22}-a_{12}a_{21}}$$

$$x_2 = 0$$

$$x_3 = 0$$

$$\Psi = \frac{1}{a_{11}a_{22}-a_{12}a_{21}}(-a_{11}b_2c_2 + a_{12}b_2c_1 + a_{21}b_1c_2 - a_{22}b_1c_1)$$

# Table #0.-1

pots:

pot #0:

new:

$$a_{11}c_2 - a_{12}c_1 \geq 0$$

all:

symbol  $c_1 : (-\infty, 0)$

symbol  $a_{11} : (0, \infty)$

symbol  $b_1 : (0, \infty)$

symbol  $b_2 : (0, \infty)$

symbol  $a_{21} : (0, \infty)$

$$-c_1 + c_2 \geq 0$$

$$a_{11}b_2 - a_{21}b_1 > 0$$

$$a_{11}c_2 - a_{12}c_1 \geq 0$$

pot #1:

new:

$$a_{11}c_2 - a_{12}c_1 \geq 0$$

all:

symbol  $a_{11} : (0, \infty)$

symbol  $c_1 : (-\infty, 0)$

symbol  $b_1 : (0, \infty)$

symbol  $b_2 : (0, \infty)$

symbol  $a_{21} : (-\infty, 0]$

$$-c_1 + c_2 \geq 0$$

$$a_{11}c_2 - a_{12}c_1 \geq 0$$

		$x_0$	$x_1$	$x_2$	$x_3$
$x_0$	$\frac{b_1}{a_{11}}$	1	$\frac{a_{12}}{a_{11}}$	$\frac{1}{a_{11}}$	0
$x_3$	$b_2 - \frac{a_{21}b_1}{a_{11}}$	0	$a_{22} - \frac{a_{12}a_{21}}{a_{11}}$	$-\frac{a_{21}}{a_{11}}$	1
$\Psi$	$-\frac{b_1c_1}{a_{11}}$	0	$c_2 - \frac{a_{12}c_1}{a_{11}}$	$-\frac{c_1}{a_{11}}$	0

Solution:

$$x_0 = \frac{b_1}{a_{11}}$$

$$x_1 = 0$$

$$x_2 = 0$$

$$x_3 = b_2 - \frac{a_{21}b_1}{a_{11}}$$

$$\Psi = -\frac{b_1c_1}{a_{11}}$$

Table #0

Moving out basis:  $x_2$  from line: 0

Moving to basis:  $x_1$

pots:

pot #0:

new:

symbol  $a_{12} : (0, \infty)$

symbol  $a_{22} : (0, \infty)$

symbol  $c_2 : (-\infty, 0)$

$c_1 - c_2 > 0$

$a_{12}b_2 - a_{22}b_1 > 0$

all:

symbol  $a_{12} : (0, \infty)$

symbol  $b_2 : (0, \infty)$

symbol  $b_1 : (0, \infty)$

symbol  $a_{22} : (0, \infty)$

symbol  $c_2 : (-\infty, 0)$

$c_1 - c_2 > 0$

$a_{12}b_2 - a_{22}b_1 > 0$

pot #1:

new:

symbol  $a_{12} : (0, \infty)$

symbol  $a_{22} : (-\infty, 0]$

symbol  $c_2 : (-\infty, 0)$

$c_1 - c_2 > 0$

all:

symbol  $a_{22} : (-\infty, 0]$

symbol  $a_{12} : (0, \infty)$

symbol  $b_1 : (0, \infty)$

symbol  $b_2 : (0, \infty)$

symbol  $c_2 : (-\infty, 0)$

$c_1 - c_2 > 0$

		$x_0$	$x_1$	$x_2$	$x_3$
$x_1$	$\frac{b_1}{a_{12}}$	$\frac{a_{11}}{a_{12}}$	1	$\frac{1}{a_{12}}$	0
$x_3$	$b_2 - \frac{a_{22}b_1}{a_{12}}$	$-\frac{a_{11}a_{22}}{a_{12}} + a_{21}$	0	$-\frac{a_{22}}{a_{12}}$	1
$\Psi$	$-\frac{b_1c_2}{a_{12}}$	$-\frac{a_{11}c_2}{a_{12}} + c_1$	0	$-\frac{c_2}{a_{12}}$	0

Table #0.0

Moving out basis:  $x_1$  from line: 0

Moving to basis:  $x_0$

pots:

pot #0:

new:

symbol  $a_{11} : (0, \infty)$

$a_{11}c_2 - a_{12}c_1 > 0$

$-a_{11}a_{22} + a_{12}a_{21} > 0$

$a_{11}b_2 - a_{21}b_1 > 0$

all:

symbol  $a_{12} : (0, \infty)$

symbol  $b_1 : (0, \infty)$

symbol  $a_{22} : (0, \infty)$

symbol  $a_{11} : (0, \infty)$

symbol  $c_2 : (-\infty, 0)$

symbol  $b_2 : (0, \infty)$

$c_1 - c_2 > 0$

$a_{12}b_2 - a_{22}b_1 > 0$

$a_{11}c_2 - a_{12}c_1 > 0$

$-a_{11}a_{22} + a_{12}a_{21} > 0$

$a_{11}b_2 - a_{21}b_1 > 0$

pot #1:

new:

symbol  $a_{11} : (0, \infty)$

$a_{11}c_2 - a_{12}c_1 > 0$

$a_{11}a_{22} - a_{12}a_{21} \geq 0$

all:

symbol  $a_{12} : (0, \infty)$

symbol  $b_1 : (0, \infty)$

symbol  $a_{22} : (0, \infty)$

symbol  $a_{11} : (0, \infty)$

symbol  $c_2 : (-\infty, 0)$

symbol  $b_2 : (0, \infty)$

$c_1 - c_2 > 0$

$a_{12}b_2 - a_{22}b_1 > 0$

$a_{11}c_2 - a_{12}c_1 > 0$

$a_{11}a_{22} - a_{12}a_{21} \geq 0$

pot #2:

new:

symbol  $a_{11} : (0, \infty)$

$a_{11}c_2 - a_{12}c_1 > 0$

$-a_{11}a_{22} + a_{12}a_{21} > 0$

$a_{11}b_2 - a_{21}b_1 > 0$

all:

symbol  $a_{12} : (0, \infty)$

symbol  $b_1 : (0, \infty)$

symbol  $a_{22} : (-\infty, 0]$

symbol  $a_{11} : (0, \infty)$

symbol  $c_2 : (-\infty, 0)$

symbol  $b_2 : (0, \infty)$

$$c_1 - c_2 > 0$$

$$a_{11}c_2 - a_{12}c_1 > 0$$

$$-a_{11}a_{22} + a_{12}a_{21} > 0$$

$$a_{11}b_2 - a_{21}b_1 > 0$$

pot #3:

new:

symbol  $a_{11} : (0, \infty)$

$$a_{11}c_2 - a_{12}c_1 > 0$$

$$a_{11}a_{22} - a_{12}a_{21} \geq 0$$

all:

symbol  $a_{12} : (0, \infty)$

symbol  $b_1 : (0, \infty)$

symbol  $a_{22} : (-\infty, 0]$

symbol  $a_{11} : (0, \infty)$

symbol  $c_2 : (-\infty, 0)$

symbol  $b_2 : (0, \infty)$

$$c_1 - c_2 > 0$$

$$a_{11}c_2 - a_{12}c_1 > 0$$

$$a_{11}a_{22} - a_{12}a_{21} \geq 0$$

		$x_0$	$x_1$	$x_2$	$x_3$
$x_0$	$\frac{b_1}{a_{11}}$	1	$\frac{a_{12}}{a_{11}}$	$\frac{1}{a_{11}}$	0
$x_3$	$b_2 - \frac{a_{21}b_1}{a_{11}}$	0	$a_{22} - \frac{a_{12}a_{21}}{a_{11}}$	$-\frac{a_{21}}{a_{11}}$	1
$\Psi$	$-\frac{b_1c_1}{a_{11}}$	0	$c_2 - \frac{a_{12}c_1}{a_{11}}$	$-\frac{c_1}{a_{11}}$	0

Solution:

$$x_0 = \frac{b_1}{a_{11}}$$

$$x_1 = 0$$

$$x_2 = 0$$

$$x_3 = b_2 - \frac{a_{21}b_1}{a_{11}}$$

$$\Psi = -\frac{b_1c_1}{a_{11}}$$

Table #0.1

Moving out basis:  $x_3$  from line: 1

Moving to basis:  $x_0$

pots:

pot #0:

new:

symbol  $a_{11} : (0, \infty)$

$a_{11}c_2 - a_{12}c_1 > 0$

$-a_{11}a_{22} + a_{12}a_{21} > 0$

$-a_{11}b_2 + a_{21}b_1 \geq 0$

all:

symbol  $a_{12} : (0, \infty)$

symbol  $b_1 : (0, \infty)$

symbol  $a_{22} : (0, \infty)$

symbol  $a_{11} : (0, \infty)$

symbol  $c_2 : (-\infty, 0)$

symbol  $b_2 : (0, \infty)$

$c_1 - c_2 > 0$

$a_{12}b_2 - a_{22}b_1 > 0$

$a_{11}c_2 - a_{12}c_1 > 0$

$-a_{11}a_{22} + a_{12}a_{21} > 0$

$-a_{11}b_2 + a_{21}b_1 \geq 0$

pot #1:

new:

symbol  $a_{11} : (-\infty, 0]$

$a_{11}c_2 - a_{12}c_1 > 0$

$-a_{11}a_{22} + a_{12}a_{21} > 0$

all:

symbol  $a_{12} : (0, \infty)$

symbol  $b_1 : (0, \infty)$

symbol  $a_{22} : (0, \infty)$

symbol  $a_{11} : (-\infty, 0]$

symbol  $c_2 : (-\infty, 0)$

symbol  $b_2 : (0, \infty)$

$c_1 - c_2 > 0$

$a_{12}b_2 - a_{22}b_1 > 0$

$a_{11}c_2 - a_{12}c_1 > 0$

$-a_{11}a_{22} + a_{12}a_{21} > 0$

pot #2:

new:

symbol  $a_{11} : (0, \infty)$

$a_{11}c_2 - a_{12}c_1 > 0$

$-a_{11}a_{22} + a_{12}a_{21} > 0$

$-a_{11}b_2 + a_{21}b_1 \geq 0$

all:

symbol  $a_{12} : (0, \infty)$

symbol  $b_1 : (0, \infty)$

symbol  $a_{22} : (-\infty, 0]$

symbol  $a_{11} : (0, \infty)$

symbol  $c_2 : (-\infty, 0)$

symbol  $b_2 : (0, \infty)$

$c_1 - c_2 > 0$

$a_{11}c_2 - a_{12}c_1 > 0$

$-a_{11}a_{22} + a_{12}a_{21} > 0$

$-a_{11}b_2 + a_{21}b_1 \geq 0$

pot #3:

new:

symbol  $a_{11} : (-\infty, 0]$

$a_{11}c_2 - a_{12}c_1 > 0$

$-a_{11}a_{22} + a_{12}a_{21} > 0$

all:

symbol  $a_{12} : (0, \infty)$

symbol  $b_1 : (0, \infty)$

symbol  $a_{22} : (-\infty, 0]$

symbol  $a_{11} : (-\infty, 0]$

symbol  $c_2 : (-\infty, 0)$

symbol  $b_2 : (0, \infty)$

$c_1 - c_2 > 0$

$a_{11}c_2 - a_{12}c_1 > 0$

$-a_{11}a_{22} + a_{12}a_{21} > 0$

		$x_0$	$x_1$	$x_2$	$x_3$
$x_1$	$\frac{a_{11}b_2 - a_{21}b_1}{a_{11}a_{22} - a_{12}a_{21}}$	0	1	$-\frac{a_{21}}{a_{11}a_{22} - a_{12}a_{21}}$	$\frac{a_{11}}{a_{11}a_{22} - a_{12}a_{21}}$
$x_0$	$\frac{-a_{12}b_2 + a_{22}b_1}{a_{11}a_{22} - a_{12}a_{21}}$	1	0	$\frac{a_{22}}{a_{11}a_{22} - a_{12}a_{21}}$	$-\frac{a_{12}}{a_{11}a_{22} - a_{12}a_{21}}$
$\Psi$	$\frac{1}{a_{11}a_{22} - a_{12}a_{21}} (-a_{11}b_2c_2 + a_{12}b_2c_1 + a_{21}b_1c_2 - a_{22}b_1c_1)$	0	0	$\frac{a_{21}c_2 - a_{22}c_1}{a_{11}a_{22} - a_{12}a_{21}}$	$\frac{-a_{11}c_2 + a_{12}c_1}{a_{11}a_{22} - a_{12}a_{21}}$



# Table #0.1.-1

pots:

pot #0:

new:

$$-a_{21}c_2 + a_{22}c_1 \geq 0$$

all:

$$\text{symbol } a_{12} : (0, \infty)$$

$$\text{symbol } b_1 : (0, \infty)$$

$$\text{symbol } a_{22} : (0, \infty)$$

$$\text{symbol } a_{11} : (0, \infty)$$

$$\text{symbol } c_2 : (-\infty, 0)$$

$$\text{symbol } b_2 : (0, \infty)$$

$$c_1 - c_2 > 0$$

$$a_{12}b_2 - a_{22}b_1 > 0$$

$$a_{11}c_2 - a_{12}c_1 > 0$$

$$-a_{11}a_{22} + a_{12}a_{21} > 0$$

$$-a_{11}b_2 + a_{21}b_1 \geq 0$$

$$-a_{21}c_2 + a_{22}c_1 \geq 0$$

pot #1:

new:

$$-a_{21}c_2 + a_{22}c_1 \geq 0$$

all:

$$\text{symbol } a_{12} : (0, \infty)$$

$$\text{symbol } b_1 : (0, \infty)$$

$$\text{symbol } a_{22} : (0, \infty)$$

$$\text{symbol } a_{11} : (-\infty, 0]$$

$$\text{symbol } c_2 : (-\infty, 0)$$

$$\text{symbol } b_2 : (0, \infty)$$

$$c_1 - c_2 > 0$$

$$a_{12}b_2 - a_{22}b_1 > 0$$

$$a_{11}c_2 - a_{12}c_1 > 0$$

$$-a_{11}a_{22} + a_{12}a_{21} > 0$$

$$-a_{21}c_2 + a_{22}c_1 \geq 0$$

pot #2:

new:

$$-a_{21}c_2 + a_{22}c_1 \geq 0$$

all:

$$\text{symbol } a_{12} : (0, \infty)$$

$$\text{symbol } b_1 : (0, \infty)$$

$$\text{symbol } a_{22} : (-\infty, 0]$$

$$\text{symbol } a_{11} : (0, \infty)$$

$$\text{symbol } c_2 : (-\infty, 0)$$

$$\text{symbol } b_2 : (0, \infty)$$

$$c_1 - c_2 > 0$$

$$a_{11}c_2 - a_{12}c_1 > 0$$

$$-a_{11}a_{22} + a_{12}a_{21} > 0$$

$$-a_{11}b_2 + a_{21}b_1 \geq 0$$

$$-a_{21}c_2 + a_{22}c_1 \geq 0$$

pot #3:

new:

$$-a_{21}c_2 + a_{22}c_1 \geq 0$$

all:

symbol  $a_{12} : (0, \infty)$

symbol  $b_1 : (0, \infty)$

symbol  $a_{22} : (-\infty, 0]$

symbol  $a_{11} : (-\infty, 0]$

symbol  $c_2 : (-\infty, 0)$

symbol  $b_2 : (0, \infty)$

$$c_1 - c_2 > 0$$

$$a_{11}c_2 - a_{12}c_1 > 0$$

$$-a_{11}a_{22} + a_{12}a_{21} > 0$$

$$-a_{21}c_2 + a_{22}c_1 \geq 0$$

		$x_0$	$x_1$	$x_2$	$x_3$
$x_1$	$\frac{a_{11}b_2 - a_{21}b_1}{a_{11}a_{22} - a_{12}a_{21}}$	0	1	$-\frac{a_{21}}{a_{11}a_{22} - a_{12}a_{21}}$	$\frac{a_{11}}{a_{11}a_{22} - a_{12}a_{21}}$
$x_0$	$\frac{-a_{12}b_2 + a_{22}b_1}{a_{11}a_{22} - a_{12}a_{21}}$	1	0	$\frac{a_{22}}{a_{11}a_{22} - a_{12}a_{21}}$	$-\frac{a_{12}}{a_{11}a_{22} - a_{12}a_{21}}$
$\Psi$	$\frac{1}{a_{11}a_{22} - a_{12}a_{21}} (-a_{11}b_2c_2 + a_{12}b_2c_1 + a_{21}b_1c_2 - a_{22}b_1c_1)$	0	0	$\frac{a_{21}c_2 - a_{22}c_1}{a_{11}a_{22} - a_{12}a_{21}}$	$\frac{-a_{11}c_2 + a_{12}c_1}{a_{11}a_{22} - a_{12}a_{21}}$

Solution:

$$x_0 = \frac{-a_{12}b_2 + a_{22}b_1}{a_{11}a_{22} - a_{12}a_{21}}$$

$$x_1 = \frac{a_{11}b_2 - a_{21}b_1}{a_{11}a_{22} - a_{12}a_{21}}$$

$$x_2 = 0$$

$$x_3 = 0$$

$$\Psi = \frac{1}{a_{11}a_{22} - a_{12}a_{21}} (-a_{11}b_2c_2 + a_{12}b_2c_1 + a_{21}b_1c_2 - a_{22}b_1c_1)$$

# Table #0.-1

pots:

pot #0:

new:

$$-a_{11}c_2 + a_{12}c_1 \geq 0$$

all:

$$\text{symbol } a_{12} : (0, \infty)$$

$$\text{symbol } b_2 : (0, \infty)$$

$$\text{symbol } b_1 : (0, \infty)$$

$$\text{symbol } a_{22} : (0, \infty)$$

$$\text{symbol } c_2 : (-\infty, 0)$$

$$c_1 - c_2 > 0$$

$$a_{12}b_2 - a_{22}b_1 > 0$$

$$-a_{11}c_2 + a_{12}c_1 \geq 0$$

pot #1:

new:

$$-a_{11}c_2 + a_{12}c_1 \geq 0$$

all:

$$\text{symbol } a_{22} : (-\infty, 0]$$

$$\text{symbol } a_{12} : (0, \infty)$$

$$\text{symbol } b_1 : (0, \infty)$$

$$\text{symbol } b_2 : (0, \infty)$$

$$\text{symbol } c_2 : (-\infty, 0)$$

$$c_1 - c_2 > 0$$

$$-a_{11}c_2 + a_{12}c_1 \geq 0$$

		$x_0$	$x_1$	$x_2$	$x_3$
$x_1$	$\frac{b_1}{a_{12}}$	$\frac{a_{11}}{a_{12}}$	1	$\frac{1}{a_{12}}$	0
$x_3$	$b_2 - \frac{a_{22}b_1}{a_{12}}$	$-\frac{a_{11}a_{22}}{a_{12}} + a_{21}$	0	$-\frac{a_{22}}{a_{12}}$	1
$\Psi$	$-\frac{b_1c_2}{a_{12}}$	$-\frac{a_{11}c_2}{a_{12}} + c_1$	0	$-\frac{c_2}{a_{12}}$	0

Solution:

$$x_0 = 0$$

$$x_1 = \frac{b_1}{a_{12}}$$

$$x_2 = 0$$

$$x_3 = b_2 - \frac{a_{22}b_1}{a_{12}}$$

$$\Psi = -\frac{b_1c_2}{a_{12}}$$

Table #1

Moving out basis:  $x_3$  from line: 1

Moving to basis:  $x_0$

pots:

pot #0:

new:

symbol  $c_1 : (-\infty, 0)$

symbol  $a_{11} : (0, \infty)$

symbol  $a_{21} : (0, \infty)$

$-c_1 + c_2 \geq 0$

$-a_{11}b_2 + a_{21}b_1 \geq 0$

all:

symbol  $a_{11} : (0, \infty)$

symbol  $c_1 : (-\infty, 0)$

symbol  $b_1 : (0, \infty)$

symbol  $b_2 : (0, \infty)$

symbol  $a_{21} : (0, \infty)$

$-c_1 + c_2 \geq 0$

$-a_{11}b_2 + a_{21}b_1 \geq 0$

pot #1:

new:

symbol  $c_1 : (-\infty, 0)$

symbol  $a_{11} : (-\infty, 0]$

symbol  $a_{21} : (0, \infty)$

$-c_1 + c_2 \geq 0$

all:

symbol  $c_1 : (-\infty, 0)$

symbol  $a_{11} : (-\infty, 0]$

symbol  $b_1 : (0, \infty)$

symbol  $b_2 : (0, \infty)$

symbol  $a_{21} : (0, \infty)$

$-c_1 + c_2 \geq 0$

		$x_0$	$x_1$	$x_2$	$x_3$
$x_2$	$-\frac{a_{11}b_2}{a_{21}} + b_1$	0	$-\frac{a_{11}a_{22}}{a_{21}} + a_{12}$	1	$-\frac{a_{11}}{a_{21}}$
$x_0$	$\frac{b_2}{a_{21}}$	1	$\frac{a_{22}}{a_{21}}$	0	$\frac{1}{a_{21}}$
$\Psi$	$-\frac{b_2c_1}{a_{21}}$	0	$c_2 - \frac{a_{22}c_1}{a_{21}}$	0	$-\frac{c_1}{a_{21}}$

Table #1.0

Moving out basis:  $x_2$  from line: 0

Moving to basis:  $x_1$

pots:

pot #0:

new:

symbol  $a_{22} : (0, \infty)$

$-a_{21}c_2 + a_{22}c_1 > 0$

$-a_{11}a_{22} + a_{12}a_{21} > 0$

$a_{12}b_2 - a_{22}b_1 > 0$

all:

symbol  $c_1 : (-\infty, 0)$

symbol  $b_1 : (0, \infty)$

symbol  $a_{22} : (0, \infty)$

symbol  $a_{11} : (0, \infty)$

symbol  $a_{21} : (0, \infty)$

symbol  $b_2 : (0, \infty)$

$-c_1 + c_2 \geq 0$

$-a_{11}b_2 + a_{21}b_1 \geq 0$

$-a_{21}c_2 + a_{22}c_1 > 0$

$-a_{11}a_{22} + a_{12}a_{21} > 0$

$a_{12}b_2 - a_{22}b_1 > 0$

pot #1:

new:

symbol  $a_{22} : (-\infty, 0]$

$-a_{21}c_2 + a_{22}c_1 > 0$

$-a_{11}a_{22} + a_{12}a_{21} > 0$

all:

symbol  $c_1 : (-\infty, 0)$

symbol  $b_1 : (0, \infty)$

symbol  $a_{22} : (-\infty, 0]$

symbol  $a_{11} : (0, \infty)$

symbol  $a_{21} : (0, \infty)$

symbol  $b_2 : (0, \infty)$

$-c_1 + c_2 \geq 0$

$-a_{11}b_2 + a_{21}b_1 \geq 0$

$-a_{21}c_2 + a_{22}c_1 > 0$

$-a_{11}a_{22} + a_{12}a_{21} > 0$

pot #2:

new:

symbol  $a_{22} : (0, \infty)$

$-a_{21}c_2 + a_{22}c_1 > 0$

$-a_{11}a_{22} + a_{12}a_{21} > 0$

$a_{12}b_2 - a_{22}b_1 > 0$

all:

symbol  $c_1 : (-\infty, 0)$

symbol  $b_1 : (0, \infty)$

symbol  $a_{22} : (0, \infty)$

symbol  $a_{11} : (-\infty, 0]$

symbol  $a_{21} : (0, \infty)$   
symbol  $b_2 : (0, \infty)$   
 $-c_1 + c_2 \geq 0$   
 $-a_{21}c_2 + a_{22}c_1 > 0$   
 $-a_{11}a_{22} + a_{12}a_{21} > 0$   
 $a_{12}b_2 - a_{22}b_1 > 0$   
pot #3:  
new:  
symbol  $a_{22} : (-\infty, 0]$   
 $-a_{21}c_2 + a_{22}c_1 > 0$   
 $-a_{11}a_{22} + a_{12}a_{21} > 0$   
all:  
symbol  $c_1 : (-\infty, 0)$   
symbol  $b_1 : (0, \infty)$   
symbol  $a_{22} : (-\infty, 0]$   
symbol  $a_{11} : (-\infty, 0]$   
symbol  $a_{21} : (0, \infty)$   
symbol  $b_2 : (0, \infty)$   
 $-c_1 + c_2 \geq 0$   
 $-a_{21}c_2 + a_{22}c_1 > 0$   
 $-a_{11}a_{22} + a_{12}a_{21} > 0$

		$x_0$	$x_1$	$x_2$	$x_3$
$x_1$	$\frac{a_{11}b_2 - a_{21}b_1}{a_{11}a_{22} - a_{12}a_{21}}$	0	1	$-\frac{a_{21}}{a_{11}a_{22} - a_{12}a_{21}}$	$\frac{a_{11}}{a_{11}a_{22} - a_{12}a_{21}}$
$x_0$	$\frac{-a_{12}b_2 + a_{22}b_1}{a_{11}a_{22} - a_{12}a_{21}}$	1	0	$\frac{a_{22}}{a_{11}a_{22} - a_{12}a_{21}}$	$-\frac{a_{12}}{a_{11}a_{22} - a_{12}a_{21}}$
$\Psi$	$\frac{1}{a_{11}a_{22} - a_{12}a_{21}} (-a_{11}b_2c_2 + a_{12}b_2c_1 + a_{21}b_1c_2 - a_{22}b_1c_1)$	0	0	$\frac{a_{21}c_2 - a_{22}c_1}{a_{11}a_{22} - a_{12}a_{21}}$	$\frac{-a_{11}c_2 + a_{12}c_1}{a_{11}a_{22} - a_{12}a_{21}}$

## Table #1.0.-1

pots:

pot #0:

new:

$$a_{11}c_2 - a_{12}c_1 \geq 0$$

all:

symbol  $c_1 : (-\infty, 0)$

symbol  $b_1 : (0, \infty)$

symbol  $a_{22} : (0, \infty)$

symbol  $a_{11} : (0, \infty)$

symbol  $a_{21} : (0, \infty)$

symbol  $b_2 : (0, \infty)$

$$-c_1 + c_2 \geq 0$$

$$-a_{11}b_2 + a_{21}b_1 \geq 0$$

$$-a_{21}c_2 + a_{22}c_1 > 0$$

$$-a_{11}a_{22} + a_{12}a_{21} > 0$$

$$a_{12}b_2 - a_{22}b_1 > 0$$

$$a_{11}c_2 - a_{12}c_1 \geq 0$$

pot #1:

new:

$$a_{11}c_2 - a_{12}c_1 \geq 0$$

all:

symbol  $c_1 : (-\infty, 0)$

symbol  $b_1 : (0, \infty)$

symbol  $a_{22} : (-\infty, 0]$

symbol  $a_{11} : (0, \infty)$

symbol  $a_{21} : (0, \infty)$

symbol  $b_2 : (0, \infty)$

$$-c_1 + c_2 \geq 0$$

$$-a_{11}b_2 + a_{21}b_1 \geq 0$$

$$-a_{21}c_2 + a_{22}c_1 > 0$$

$$-a_{11}a_{22} + a_{12}a_{21} > 0$$

$$a_{11}c_2 - a_{12}c_1 \geq 0$$

pot #2:

new:

$$a_{11}c_2 - a_{12}c_1 \geq 0$$

all:

symbol  $c_1 : (-\infty, 0)$

symbol  $b_1 : (0, \infty)$

symbol  $a_{22} : (0, \infty)$

symbol  $a_{11} : (-\infty, 0]$

symbol  $a_{21} : (0, \infty)$

symbol  $b_2 : (0, \infty)$

$$-c_1 + c_2 \geq 0$$

$$-a_{21}c_2 + a_{22}c_1 > 0$$

$$-a_{11}a_{22} + a_{12}a_{21} > 0$$

$$a_{12}b_2 - a_{22}b_1 > 0$$

$$a_{11}c_2 - a_{12}c_1 \geq 0$$

pot #3:

new:

$$a_{11}c_2 - a_{12}c_1 \geq 0$$

all:

symbol  $c_1 : (-\infty, 0)$

symbol  $b_1 : (0, \infty)$

symbol  $a_{22} : (-\infty, 0]$

symbol  $a_{11} : (-\infty, 0]$

symbol  $a_{21} : (0, \infty)$

symbol  $b_2 : (0, \infty)$

$$-c_1 + c_2 \geq 0$$

$$-a_{21}c_2 + a_{22}c_1 > 0$$

$$-a_{11}a_{22} + a_{12}a_{21} > 0$$

$$a_{11}c_2 - a_{12}c_1 \geq 0$$

		$x_0$	$x_1$	$x_2$	$x_3$
$x_1$	$\frac{a_{11}b_2 - a_{21}b_1}{a_{11}a_{22} - a_{12}a_{21}}$	0	1	$-\frac{a_{21}}{a_{11}a_{22} - a_{12}a_{21}}$	$\frac{a_{11}}{a_{11}a_{22} - a_{12}a_{21}}$
$x_0$	$\frac{-a_{12}b_2 + a_{22}b_1}{a_{11}a_{22} - a_{12}a_{21}}$	1	0	$\frac{a_{22}}{a_{11}a_{22} - a_{12}a_{21}}$	$-\frac{a_{12}}{a_{11}a_{22} - a_{12}a_{21}}$
$\Psi$	$\frac{1}{a_{11}a_{22} - a_{12}a_{21}} (-a_{11}b_2c_2 + a_{12}b_2c_1 + a_{21}b_1c_2 - a_{22}b_1c_1)$	0	0	$\frac{a_{21}c_2 - a_{22}c_1}{a_{11}a_{22} - a_{12}a_{21}}$	$\frac{-a_{11}c_2 + a_{12}c_1}{a_{11}a_{22} - a_{12}a_{21}}$

Solution:

$$x_0 = \frac{-a_{12}b_2 + a_{22}b_1}{a_{11}a_{22} - a_{12}a_{21}}$$

$$x_1 = \frac{a_{11}b_2 - a_{21}b_1}{a_{11}a_{22} - a_{12}a_{21}}$$

$$x_2 = 0$$

$$x_3 = 0$$

$$\Psi = \frac{1}{a_{11}a_{22} - a_{12}a_{21}} (-a_{11}b_2c_2 + a_{12}b_2c_1 + a_{21}b_1c_2 - a_{22}b_1c_1)$$



Table #1.1

Moving out basis:  $x_0$  from line: 1

Moving to basis:  $x_1$

pots:

pot #0:

new:

symbol  $a_{22} : (0, \infty)$

$-a_{21}c_2 + a_{22}c_1 > 0$

$-a_{11}a_{22} + a_{12}a_{21} > 0$

$-a_{12}b_2 + a_{22}b_1 \geq 0$

all:

symbol  $c_1 : (-\infty, 0)$

symbol  $b_1 : (0, \infty)$

symbol  $a_{22} : (0, \infty)$

symbol  $a_{11} : (0, \infty)$

symbol  $a_{21} : (0, \infty)$

symbol  $b_2 : (0, \infty)$

$-c_1 + c_2 \geq 0$

$-a_{11}b_2 + a_{21}b_1 \geq 0$

$-a_{21}c_2 + a_{22}c_1 > 0$

$-a_{11}a_{22} + a_{12}a_{21} > 0$

$-a_{12}b_2 + a_{22}b_1 \geq 0$

pot #1:

new:

symbol  $a_{22} : (0, \infty)$

$-a_{21}c_2 + a_{22}c_1 > 0$

$a_{11}a_{22} - a_{12}a_{21} \geq 0$

all:

symbol  $c_1 : (-\infty, 0)$

symbol  $b_1 : (0, \infty)$

symbol  $a_{22} : (0, \infty)$

symbol  $a_{11} : (0, \infty)$

symbol  $a_{21} : (0, \infty)$

symbol  $b_2 : (0, \infty)$

$-c_1 + c_2 \geq 0$

$-a_{11}b_2 + a_{21}b_1 \geq 0$

$-a_{21}c_2 + a_{22}c_1 > 0$

$a_{11}a_{22} - a_{12}a_{21} \geq 0$

pot #2:

new:

symbol  $a_{22} : (0, \infty)$

$-a_{21}c_2 + a_{22}c_1 > 0$

$-a_{11}a_{22} + a_{12}a_{21} > 0$

$-a_{12}b_2 + a_{22}b_1 \geq 0$

all:

symbol  $c_1 : (-\infty, 0)$

symbol  $b_1 : (0, \infty)$

symbol  $a_{22} : (0, \infty)$

symbol  $a_{11} : (-\infty, 0]$

symbol  $a_{21} : (0, \infty)$

symbol  $b_2 : (0, \infty)$

$$-c_1 + c_2 \geq 0$$

$$-a_{21}c_2 + a_{22}c_1 > 0$$

$$-a_{11}a_{22} + a_{12}a_{21} > 0$$

$$-a_{12}b_2 + a_{22}b_1 \geq 0$$

pot #3:

new:

symbol  $a_{22} : (0, \infty)$

$$-a_{21}c_2 + a_{22}c_1 > 0$$

$$a_{11}a_{22} - a_{12}a_{21} \geq 0$$

all:

symbol  $c_1 : (-\infty, 0)$

symbol  $b_1 : (0, \infty)$

symbol  $a_{22} : (0, \infty)$

symbol  $a_{11} : (-\infty, 0]$

symbol  $a_{21} : (0, \infty)$

symbol  $b_2 : (0, \infty)$

$$-c_1 + c_2 \geq 0$$

$$-a_{21}c_2 + a_{22}c_1 > 0$$

$$a_{11}a_{22} - a_{12}a_{21} \geq 0$$

		$x_0$	$x_1$	$x_2$	$x_3$
$x_2$	$-\frac{a_{12}b_2}{a_{22}} + b_1$	$a_{11} - \frac{a_{12}a_{21}}{a_{22}}$	0	1	$-\frac{a_{12}}{a_{22}}$
$x_1$	$\frac{b_2}{a_{22}}$	$\frac{a_{21}}{a_{22}}$	1	0	$\frac{1}{a_{22}}$
$\Psi$	$-\frac{b_2c_2}{a_{22}}$	$-\frac{a_{21}c_2}{a_{22}} + c_1$	0	0	$-\frac{c_2}{a_{22}}$

Solution:

$$x_0 = 0$$

$$x_1 = \frac{b_2}{a_{22}}$$

$$x_2 = -\frac{a_{12}b_2}{a_{22}} + b_1$$

$$x_3 = 0$$

$$\Psi = -\frac{b_2c_2}{a_{22}}$$

# Table #1.-1

pots:

pot #0:

new:

$$a_{21}c_2 - a_{22}c_1 \geq 0$$

all:

symbol  $a_{11} : (0, \infty)$

symbol  $c_1 : (-\infty, 0)$

symbol  $b_1 : (0, \infty)$

symbol  $b_2 : (0, \infty)$

symbol  $a_{21} : (0, \infty)$

$$-c_1 + c_2 \geq 0$$

$$-a_{11}b_2 + a_{21}b_1 \geq 0$$

$$a_{21}c_2 - a_{22}c_1 \geq 0$$

pot #1:

new:

$$a_{21}c_2 - a_{22}c_1 \geq 0$$

all:

symbol  $c_1 : (-\infty, 0)$

symbol  $a_{11} : (-\infty, 0]$

symbol  $b_1 : (0, \infty)$

symbol  $b_2 : (0, \infty)$

symbol  $a_{21} : (0, \infty)$

$$-c_1 + c_2 \geq 0$$

$$a_{21}c_2 - a_{22}c_1 \geq 0$$

		$x_0$	$x_1$	$x_2$	$x_3$
$x_2$	$-\frac{a_{11}b_2}{a_{21}} + b_1$	0	$-\frac{a_{11}a_{22}}{a_{21}} + a_{12}$	1	$-\frac{a_{11}}{a_{21}}$
$x_0$	$\frac{b_2}{a_{21}}$	1	$\frac{a_{22}}{a_{21}}$	0	$\frac{1}{a_{21}}$
$\Psi$	$-\frac{b_2c_1}{a_{21}}$	0	$c_2 - \frac{a_{22}c_1}{a_{21}}$	0	$-\frac{c_1}{a_{21}}$

Solution:

$$x_0 = \frac{b_2}{a_{21}}$$

$$x_1 = 0$$

$$x_2 = -\frac{a_{11}b_2}{a_{21}} + b_1$$

$$x_3 = 0$$

$$\Psi = -\frac{b_2c_1}{a_{21}}$$

Table #1

Moving out basis:  $x_3$  from line: 1

Moving to basis:  $x_1$

pots:

pot #0:

new:

symbol  $a_{12} : (0, \infty)$

symbol  $a_{22} : (0, \infty)$

symbol  $c_2 : (-\infty, 0)$

$c_1 - c_2 > 0$

$-a_{12}b_2 + a_{22}b_1 \geq 0$

all:

symbol  $b_2 : (0, \infty)$

symbol  $c_2 : (-\infty, 0)$

symbol  $a_{12} : (0, \infty)$

symbol  $b_1 : (0, \infty)$

symbol  $a_{22} : (0, \infty)$

$c_1 - c_2 > 0$

$-a_{12}b_2 + a_{22}b_1 \geq 0$

pot #1:

new:

symbol  $a_{12} : (-\infty, 0]$

symbol  $a_{22} : (0, \infty)$

symbol  $c_2 : (-\infty, 0)$

$c_1 - c_2 > 0$

all:

symbol  $b_2 : (0, \infty)$

symbol  $c_2 : (-\infty, 0)$

symbol  $a_{12} : (-\infty, 0]$

symbol  $b_1 : (0, \infty)$

symbol  $a_{22} : (0, \infty)$

$c_1 - c_2 > 0$

		$x_0$	$x_1$	$x_2$	$x_3$
$x_2$	$-\frac{a_{12}b_2}{a_{22}} + b_1$	$a_{11} - \frac{a_{12}a_{21}}{a_{22}}$	0	1	$-\frac{a_{12}}{a_{22}}$
$x_1$	$\frac{b_2}{a_{22}}$	$\frac{a_{21}}{a_{22}}$	1	0	$\frac{1}{a_{22}}$
$\Psi$	$-\frac{b_2c_2}{a_{22}}$	$-\frac{a_{21}c_2}{a_{22}} + c_1$	0	0	$-\frac{c_2}{a_{22}}$

Table #1.0

Moving out basis:  $x_2$  from line: 0

Moving to basis:  $x_0$

pots:

pot #0:

new:

symbol  $a_{21} : (0, \infty)$

$a_{21}c_2 - a_{22}c_1 > 0$

$a_{11}a_{22} - a_{12}a_{21} > 0$

$a_{11}b_2 - a_{21}b_1 > 0$

all:

symbol  $a_{12} : (0, \infty)$

symbol  $b_1 : (0, \infty)$

symbol  $a_{22} : (0, \infty)$

symbol  $c_2 : (-\infty, 0)$

symbol  $a_{21} : (0, \infty)$

symbol  $b_2 : (0, \infty)$

$c_1 - c_2 > 0$

$-a_{12}b_2 + a_{22}b_1 \geq 0$

$a_{21}c_2 - a_{22}c_1 > 0$

$a_{11}a_{22} - a_{12}a_{21} > 0$

$a_{11}b_2 - a_{21}b_1 > 0$

pot #1:

new:

symbol  $a_{21} : (-\infty, 0]$

$a_{21}c_2 - a_{22}c_1 > 0$

$a_{11}a_{22} - a_{12}a_{21} > 0$

all:

symbol  $a_{12} : (0, \infty)$

symbol  $b_1 : (0, \infty)$

symbol  $a_{22} : (0, \infty)$

symbol  $c_2 : (-\infty, 0)$

symbol  $a_{21} : (-\infty, 0]$

symbol  $b_2 : (0, \infty)$

$c_1 - c_2 > 0$

$-a_{12}b_2 + a_{22}b_1 \geq 0$

$a_{21}c_2 - a_{22}c_1 > 0$

$a_{11}a_{22} - a_{12}a_{21} > 0$

pot #2:

new:

symbol  $a_{21} : (0, \infty)$

$a_{21}c_2 - a_{22}c_1 > 0$

$a_{11}a_{22} - a_{12}a_{21} > 0$

$a_{11}b_2 - a_{21}b_1 > 0$

all:

symbol  $a_{12} : (-\infty, 0]$

symbol  $b_1 : (0, \infty)$

symbol  $a_{22} : (0, \infty)$

symbol  $c_2 : (-\infty, 0)$

symbol  $a_{21} : (0, \infty)$

symbol  $b_2 : (0, \infty)$

$c_1 - c_2 > 0$

$a_{21}c_2 - a_{22}c_1 > 0$

$a_{11}a_{22} - a_{12}a_{21} > 0$

$a_{11}b_2 - a_{21}b_1 > 0$

pot #3:

new:

symbol  $a_{21} : (-\infty, 0]$

$a_{21}c_2 - a_{22}c_1 > 0$

$a_{11}a_{22} - a_{12}a_{21} > 0$

all:

symbol  $a_{12} : (-\infty, 0]$

symbol  $b_1 : (0, \infty)$

symbol  $a_{22} : (0, \infty)$

symbol  $c_2 : (-\infty, 0)$

symbol  $a_{21} : (-\infty, 0]$

symbol  $b_2 : (0, \infty)$

$c_1 - c_2 > 0$

$a_{21}c_2 - a_{22}c_1 > 0$

$a_{11}a_{22} - a_{12}a_{21} > 0$

		$x_0$	$x_1$	$x_2$	$x_3$
$x_0$	$\frac{-a_{12}b_2+a_{22}b_1}{a_{11}a_{22}-a_{12}a_{21}}$	1	0	$\frac{a_{22}}{a_{11}a_{22}-a_{12}a_{21}}$	$-\frac{a_{12}}{a_{11}a_{22}-a_{12}a_{21}}$
$x_1$	$\frac{a_{11}b_2-a_{21}b_1}{a_{11}a_{22}-a_{12}a_{21}}$	0	1	$-\frac{a_{21}}{a_{11}a_{22}-a_{12}a_{21}}$	$\frac{a_{11}}{a_{11}a_{22}-a_{12}a_{21}}$
$\Psi$	$\frac{1}{a_{11}a_{22}-a_{12}a_{21}}(-a_{11}b_2c_2 + a_{12}b_2c_1 + a_{21}b_1c_2 - a_{22}b_1c_1)$	0	0	$\frac{a_{21}c_2-a_{22}c_1}{a_{11}a_{22}-a_{12}a_{21}}$	$\frac{-a_{11}c_2+a_{12}c_1}{a_{11}a_{22}-a_{12}a_{21}}$

# Table #1.0.-1

pots:

pot #0:

new:

$$-a_{11}c_2 + a_{12}c_1 \geq 0$$

all:

symbol  $a_{12} : (0, \infty)$

symbol  $b_1 : (0, \infty)$

symbol  $a_{22} : (0, \infty)$

symbol  $c_2 : (-\infty, 0)$

symbol  $a_{21} : (0, \infty)$

symbol  $b_2 : (0, \infty)$

$$c_1 - c_2 > 0$$

$$-a_{12}b_2 + a_{22}b_1 \geq 0$$

$$a_{21}c_2 - a_{22}c_1 > 0$$

$$a_{11}a_{22} - a_{12}a_{21} > 0$$

$$a_{11}b_2 - a_{21}b_1 > 0$$

$$-a_{11}c_2 + a_{12}c_1 \geq 0$$

pot #1:

new:

$$-a_{11}c_2 + a_{12}c_1 \geq 0$$

all:

symbol  $a_{12} : (0, \infty)$

symbol  $b_1 : (0, \infty)$

symbol  $a_{22} : (0, \infty)$

symbol  $c_2 : (-\infty, 0)$

symbol  $a_{21} : (-\infty, 0]$

symbol  $b_2 : (0, \infty)$

$$c_1 - c_2 > 0$$

$$-a_{12}b_2 + a_{22}b_1 \geq 0$$

$$a_{21}c_2 - a_{22}c_1 > 0$$

$$a_{11}a_{22} - a_{12}a_{21} > 0$$

$$-a_{11}c_2 + a_{12}c_1 \geq 0$$

pot #2:

new:

$$-a_{11}c_2 + a_{12}c_1 \geq 0$$

all:

symbol  $a_{12} : (-\infty, 0]$

symbol  $b_1 : (0, \infty)$

symbol  $a_{22} : (0, \infty)$

symbol  $c_2 : (-\infty, 0)$

symbol  $a_{21} : (0, \infty)$

symbol  $b_2 : (0, \infty)$

$$c_1 - c_2 > 0$$

$$a_{21}c_2 - a_{22}c_1 > 0$$

$$a_{11}a_{22} - a_{12}a_{21} > 0$$

$$a_{11}b_2 - a_{21}b_1 > 0$$

$$-a_{11}c_2 + a_{12}c_1 \geq 0$$

pot #3:

new:

$$-a_{11}c_2 + a_{12}c_1 \geq 0$$

all:

symbol  $a_{12} : (-\infty, 0]$

symbol  $b_1 : (0, \infty)$

symbol  $a_{22} : (0, \infty)$

symbol  $c_2 : (-\infty, 0)$

symbol  $a_{21} : (-\infty, 0]$

symbol  $b_2 : (0, \infty)$

$$c_1 - c_2 > 0$$

$$a_{21}c_2 - a_{22}c_1 > 0$$

$$a_{11}a_{22} - a_{12}a_{21} > 0$$

$$-a_{11}c_2 + a_{12}c_1 \geq 0$$

		$x_0$	$x_1$	$x_2$	$x_3$
$x_0$	$\frac{-a_{12}b_2+a_{22}b_1}{a_{11}a_{22}-a_{12}a_{21}}$	1	0	$\frac{a_{22}}{a_{11}a_{22}-a_{12}a_{21}}$	$-\frac{a_{12}}{a_{11}a_{22}-a_{12}a_{21}}$
$x_1$	$\frac{a_{11}b_2-a_{21}b_1}{a_{11}a_{22}-a_{12}a_{21}}$	0	1	$-\frac{a_{21}}{a_{11}a_{22}-a_{12}a_{21}}$	$\frac{a_{11}}{a_{11}a_{22}-a_{12}a_{21}}$
$\Psi$	$\frac{1}{a_{11}a_{22}-a_{12}a_{21}}(-a_{11}b_2c_2 + a_{12}b_2c_1 + a_{21}b_1c_2 - a_{22}b_1c_1)$	0	0	$\frac{a_{21}c_2-a_{22}c_1}{a_{11}a_{22}-a_{12}a_{21}}$	$\frac{-a_{11}c_2+a_{12}c_1}{a_{11}a_{22}-a_{12}a_{21}}$

Solution:

$$x_0 = \frac{-a_{12}b_2+a_{22}b_1}{a_{11}a_{22}-a_{12}a_{21}}$$

$$x_1 = \frac{a_{11}b_2-a_{21}b_1}{a_{11}a_{22}-a_{12}a_{21}}$$

$$x_2 = 0$$

$$x_3 = 0$$

$$\Psi = \frac{1}{a_{11}a_{22}-a_{12}a_{21}}(-a_{11}b_2c_2 + a_{12}b_2c_1 + a_{21}b_1c_2 - a_{22}b_1c_1)$$



Table #1.1

Moving out basis:  $x_1$  from line: 1

Moving to basis:  $x_0$

pots:

pot #0:

new:

symbol  $a_{21} : (0, \infty)$

$a_{21}c_2 - a_{22}c_1 > 0$

$a_{11}a_{22} - a_{12}a_{21} > 0$

$-a_{11}b_2 + a_{21}b_1 \geq 0$

all:

symbol  $a_{12} : (0, \infty)$

symbol  $b_1 : (0, \infty)$

symbol  $a_{22} : (0, \infty)$

symbol  $c_2 : (-\infty, 0)$

symbol  $a_{21} : (0, \infty)$

symbol  $b_2 : (0, \infty)$

$c_1 - c_2 > 0$

$-a_{12}b_2 + a_{22}b_1 \geq 0$

$a_{21}c_2 - a_{22}c_1 > 0$

$a_{11}a_{22} - a_{12}a_{21} > 0$

$-a_{11}b_2 + a_{21}b_1 \geq 0$

pot #1:

new:

symbol  $a_{21} : (0, \infty)$

$a_{21}c_2 - a_{22}c_1 > 0$

$-a_{11}a_{22} + a_{12}a_{21} \geq 0$

all:

symbol  $a_{12} : (0, \infty)$

symbol  $b_1 : (0, \infty)$

symbol  $a_{22} : (0, \infty)$

symbol  $c_2 : (-\infty, 0)$

symbol  $a_{21} : (0, \infty)$

symbol  $b_2 : (0, \infty)$

$c_1 - c_2 > 0$

$-a_{12}b_2 + a_{22}b_1 \geq 0$

$a_{21}c_2 - a_{22}c_1 > 0$

$-a_{11}a_{22} + a_{12}a_{21} \geq 0$

pot #2:

new:

symbol  $a_{21} : (0, \infty)$

$a_{21}c_2 - a_{22}c_1 > 0$

$a_{11}a_{22} - a_{12}a_{21} > 0$

$-a_{11}b_2 + a_{21}b_1 \geq 0$

all:

symbol  $a_{12} : (-\infty, 0]$

symbol  $b_1 : (0, \infty)$

symbol  $a_{22} : (0, \infty)$

symbol  $c_2 : (-\infty, 0)$

symbol  $a_{21} : (0, \infty)$

symbol  $b_2 : (0, \infty)$

$$c_1 - c_2 > 0$$

$$a_{21}c_2 - a_{22}c_1 > 0$$

$$a_{11}a_{22} - a_{12}a_{21} > 0$$

$$-a_{11}b_2 + a_{21}b_1 \geq 0$$

pot #3:

new:

symbol  $a_{21} : (0, \infty)$

$$a_{21}c_2 - a_{22}c_1 > 0$$

$$-a_{11}a_{22} + a_{12}a_{21} \geq 0$$

all:

symbol  $a_{12} : (-\infty, 0]$

symbol  $b_1 : (0, \infty)$

symbol  $a_{22} : (0, \infty)$

symbol  $c_2 : (-\infty, 0)$

symbol  $a_{21} : (0, \infty)$

symbol  $b_2 : (0, \infty)$

$$c_1 - c_2 > 0$$

$$a_{21}c_2 - a_{22}c_1 > 0$$

$$-a_{11}a_{22} + a_{12}a_{21} \geq 0$$

		$x_0$	$x_1$	$x_2$	$x_3$
$x_2$	$-\frac{a_{11}b_2}{a_{21}} + b_1$	0	$-\frac{a_{11}a_{22}}{a_{21}} + a_{12}$	1	$-\frac{a_{11}}{a_{21}}$
$x_0$	$\frac{b_2}{a_{21}}$	1	$\frac{a_{22}}{a_{21}}$	0	$\frac{1}{a_{21}}$
$\Psi$	$-\frac{b_2c_1}{a_{21}}$	0	$c_2 - \frac{a_{22}c_1}{a_{21}}$	0	$-\frac{c_1}{a_{21}}$

Solution:

$$x_0 = \frac{b_2}{a_{21}}$$

$$x_1 = 0$$

$$x_2 = -\frac{a_{11}b_2}{a_{21}} + b_1$$

$$x_3 = 0$$

$$\Psi = -\frac{b_2c_1}{a_{21}}$$

# Table #1.-1

pots:

pot #0:

new:

$$-a_{21}c_2 + a_{22}c_1 \geq 0$$

all:

$$\text{symbol } b_2 : (0, \infty)$$

$$\text{symbol } c_2 : (-\infty, 0)$$

$$\text{symbol } a_{12} : (0, \infty)$$

$$\text{symbol } b_1 : (0, \infty)$$

$$\text{symbol } a_{22} : (0, \infty)$$

$$c_1 - c_2 > 0$$

$$-a_{12}b_2 + a_{22}b_1 \geq 0$$

$$-a_{21}c_2 + a_{22}c_1 \geq 0$$

pot #1:

new:

$$-a_{21}c_2 + a_{22}c_1 \geq 0$$

all:

$$\text{symbol } b_2 : (0, \infty)$$

$$\text{symbol } c_2 : (-\infty, 0)$$

$$\text{symbol } a_{12} : (-\infty, 0]$$

$$\text{symbol } b_1 : (0, \infty)$$

$$\text{symbol } a_{22} : (0, \infty)$$

$$c_1 - c_2 > 0$$

$$-a_{21}c_2 + a_{22}c_1 \geq 0$$

		$x_0$	$x_1$	$x_2$	$x_3$
$x_2$	$-\frac{a_{12}b_2}{a_{22}} + b_1$	$a_{11} - \frac{a_{12}a_{21}}{a_{22}}$	0	1	$-\frac{a_{12}}{a_{22}}$
$x_1$	$\frac{b_2}{a_{22}}$	$\frac{a_{21}}{a_{22}}$	1	0	$\frac{1}{a_{22}}$
$\Psi$	$-\frac{b_2c_2}{a_{22}}$	$-\frac{a_{21}c_2}{a_{22}} + c_1$	0	0	$-\frac{c_2}{a_{22}}$

Solution:

$$x_0 = 0$$

$$x_1 = \frac{b_2}{a_{22}}$$

$$x_2 = -\frac{a_{12}b_2}{a_{22}} + b_1$$

$$x_3 = 0$$

$$\Psi = -\frac{b_2c_2}{a_{22}}$$

Table #-1

pots:  
pot #0:  
new:  
symbol  $c_1 : [0, \infty)$   
symbol  $c_2 : [0, \infty)$   
all:  
symbol  $c_1 : [0, \infty)$   
symbol  $c_2 : [0, \infty)$   
symbol  $b_1 : (0, \infty)$   
symbol  $b_2 : (0, \infty)$

		$x_0$	$x_1$	$x_2$	$x_3$
$x_2$	$b_1$	$a_{11}$	$a_{12}$	1	0
$x_3$	$b_2$	$a_{21}$	$a_{22}$	0	1
$\Psi$	0	$c_1$	$c_2$	0	0

Solution:  
 $x_0 = 0$   
 $x_1 = 0$   
 $x_2 = b_1$   
 $x_3 = b_2$   
 $\Psi = 0$