# Table # initial

pots: pot #0: new:

symbol  $b_2: (0, \infty)$ symbol  $b_1: (0, \infty)$ 

all:

symbol  $b_2: (0, \infty)$ symbol  $b_1: (0, \infty)$ 

		$x_0$	$x_1$	$x_2$	$x_3$
$x_2$	$b_1$	$a_{11}$	$a_{12}$	1	0
$x_3$	$b_2$	$a_{21}$	$a_{22}$	0	1
Ψ	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  $a_{11}:(0,\infty)$ symbol  $a_{21}:(0,\infty)$ symbol  $c_1:(-\infty,0)$  $-c_1 + c_2 \geqslant 0$  $a_{11}b_2 - a_{21}b_1 \geqslant 0$ all: symbol  $b_2:(0,\infty)$ symbol  $a_{11}:(0,\infty)$ symbol  $b_1:(0,\infty)$ symbol  $c_1:(-\infty,0)$ symbol  $a_{21}:(0,\infty)$  $-c_1 + c_2 \geqslant 0$  $a_{11}b_2 - a_{21}b_1 \geqslant 0$ pot #1: new: symbol  $a_{11}:(0,\infty)$ symbol  $a_{21}: (-\infty, 0]$ symbol  $c_1: (-\infty, 0)$  $-c_1 + c_2 \geqslant 0$ all: symbol  $b_2:(0,\infty)$ symbol  $a_{11}:(0,\infty)$ symbol  $b_1:(0,\infty)$ symbol  $c_1: (-\infty, 0)$ symbol  $a_{21}:(-\infty,0]$ 

 $-c_1 + c_2 \geqslant 0$ 

		$x_0$	$x_1$	$x_2$	$x_3$
$x_0$	$\frac{b_1}{a_{11}}$	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
Ψ	$-rac{b_{1}c_{1}}{a_{11}}$	0	$c_2 - \frac{a_{12}c_1}{a_{11}}$	$-\frac{c_1}{a_{11}}$	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 \geqslant 0
all:
symbol b_2:(0,\infty)
symbol a_{11}:(0,\infty)
symbol b_1:(0,\infty)
symbol c_1:(-\infty,0)
symbol a_{21}:(0,\infty)
symbol a_{12}:(0,\infty)
-c_1 + c_2 \geqslant 0
a_{11}b_2 - a_{21}b_1 \geqslant 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 \geqslant 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} \geqslant 0
all:
symbol b_2:(0,\infty)
symbol a_{11}:(0,\infty)
symbol b_1:(0,\infty)
symbol c_1:(-\infty,0)
symbol a_{21}:(0,\infty)
symbol a_{12}:(0,\infty)
-c_1 + c_2 \geqslant 0
a_{11}b_2 - a_{21}b_1 \geqslant 0
-a_{11}c_2 + a_{12}c_1 > 0
-a_{11}a_{22} + a_{12}a_{21} \geqslant 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 \geqslant 0
all:
symbol b_2:(0,\infty)
symbol a_{11}:(0,\infty)
symbol b_1:(0,\infty)
```

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

Table #0.0

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

		$x_0$	$x_1$	$x_2$	$x_3$
$x_1$	$\frac{b_1}{a_{12}}$	$\frac{a_{11}}{a_{12}}$	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
Ψ	$-\frac{b_1c_2}{a_{12}}$	$-\frac{a_{11}c_2}{a_{12}} + c_1$	0	$-\frac{c_2}{a_{12}}$	0

$$x_0 = 0$$

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

$$x_2 = 0$$

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

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

```
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 \geqslant 0
all:
symbol b_2:(0,\infty)
symbol a_{11}:(0,\infty)
symbol b_1:(0,\infty)
symbol c_1:(-\infty,0)
symbol a_{21}:(0,\infty)
symbol a_{12}:(0,\infty)
-c_1 + c_2 \geqslant 0
a_{11}b_2 - a_{21}b_1 \geqslant 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 \geqslant 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 b_2:(0,\infty)
symbol a_{11}:(0,\infty)
symbol b_1:(0,\infty)
symbol c_1:(-\infty,0)
symbol a_{21}:(0,\infty)
symbol a_{12}: (-\infty, 0]
-c_1 + c_2 \geqslant 0
a_{11}b_2 - a_{21}b_1 \geqslant 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 \geqslant 0
all:
symbol b_2:(0,\infty)
symbol a_{11}:(0,\infty)
symbol b_1:(0,\infty)
```

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

Table #0.1

symbol  $a_{21}:(-\infty,0]$ symbol  $a_{12}:(0,\infty)$  $-c_1 + c_2 \geqslant 0$  $-a_{11}c_2 + a_{12}c_1 > 0$  $a_{11}a_{22} - a_{12}a_{21} > 0$  $-a_{12}b_2 + a_{22}b_1 \geqslant 0$ 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  $b_2:(0,\infty)$ symbol  $a_{11}:(0,\infty)$ symbol  $b_1:(0,\infty)$ symbol  $c_1:(-\infty,0)$ symbol  $a_{21}: (-\infty, 0]$ symbol  $a_{12}:(-\infty,0]$  $-c_1 + c_2 \geqslant 0$  $-a_{11}c_2 + a_{12}c_1 > 0$  $a_{11}a_{22} - a_{12}a_{21} > 0$ 

		$x_0$	$x_1$	$x_2$	$x_3$
$x_0$	$rac{-a_{12}b_2+a_{22}b_1}{a_{11}a_{22}-a_{12}a_{21}}$	1	0	$\frac{a_{22}}{a_{11}a_{22} - a_{12}a_{21}}$	$-\frac{a_{12}}{a_{11}a_{22}-a_{12}a_{21}}$
$x_1$	$rac{a_{11}b_2 - a_{21}b_1}{a_{11}a_{22} - a_{12}a_{21}}$	0	1	$-\frac{a_{21}}{a_{11}a_{22}-a_{12}a_{21}}$	$\frac{a_{11}}{a_{11}a_{22} - a_{12}a_{21}}$
Ψ	$\frac{1}{a_{11}a_{22}-a_{12}a_{21}}\left(-a_{11}b_{2}c_{2}+a_{12}b_{2}c_{1}+a_{21}b_{1}c_{2}-a_{22}b_{1}c_{1}\right)$	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  $b_2:(0,\infty)$ 

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

symbol  $b_1:(0,\infty)$ 

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

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

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

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

 $-c_1 + c_2 \geqslant 0$ 

 $a_{11}b_2 - a_{21}b_1 \geqslant 0$ 

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

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

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

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

pot #1:

new:

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

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

all:

symbol  $b_2:(0,\infty)$ 

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

symbol  $b_1:(0,\infty)$ 

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

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

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

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

 $-c_1 + c_2 \geqslant 0$ 

 $a_{11}b_2 - a_{21}b_1 \geqslant 0$ 

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

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

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

		$x_0$	$x_1$	$x_2$	$x_3$
$x_2$	$-\frac{a_{12}b_2}{a_{22}} + b_1$	$a_{11} - \frac{a_{12}a_{21}}{a_{22}}$	0	1	$-\frac{a_{12}}{a_{22}}$
$x_1$	$\frac{b_2}{a_{22}}$	$\frac{a_{21}}{a_{22}}$	1	0	$\frac{1}{a_{22}}$
Ψ	$-rac{b_{2}c_{2}}{a_{22}}$	$-\frac{a_{21}c_2}{a_{22}}+c_1$	0	0	$-\frac{c_2}{a_{22}}$

$$x_0 = 0$$

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

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

$$x_3 = 0$$

$$\Psi = -\frac{b_2 c_2}{a_{22}}$$

```
Table #0.1.-1 pots: pot #0:
```

new:  $a_{21}c_2 - a_{22}c_1 \ge 0$ 

 $a_{21}c_2 - a_{22}c_1 \geqslant 0$  all:

symbol  $b_2: (0, \infty)$ 

symbol  $a_{11}:(0,\infty)$ symbol  $b_1:(0,\infty)$ 

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

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

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

 $-c_1 + c_2 \geqslant 0$ 

 $a_{11}b_2 - a_{21}b_1 \geqslant 0$ 

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

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

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

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

pot #1:

new:

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

all:

symbol  $b_2:(0,\infty)$ 

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

symbol  $b_1:(0,\infty)$ 

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

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

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

 $-c_1 + c_2 \geqslant 0$ 

 $a_{11}b_2 - a_{21}b_1 \geqslant 0$ 

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

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

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

pot #2:

new:

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

all:

symbol  $b_2:(0,\infty)$ 

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

symbol  $b_1:(0,\infty)$ 

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

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

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

 $-c_1 + c_2 \geqslant 0$ 

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

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

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

 $a_{21}c_2 - a_{22}c_1 \geqslant 0$ pot #3:

new:

$$\begin{array}{l} a_{21}c_2 - a_{22}c_1 \geqslant 0 \\ \text{all:} \\ \text{symbol } b_2 : (0, \infty) \\ \text{symbol } a_{11} : (0, \infty) \\ \text{symbol } b_1 : (0, \infty) \\ \text{symbol } c_1 : (-\infty, 0) \\ \text{symbol } a_{21} : (-\infty, 0] \\ \text{symbol } a_{12} : (-\infty, 0] \\ -c_1 + c_2 \geqslant 0 \\ -a_{11}c_2 + a_{12}c_1 > 0 \\ a_{11}a_{22} - a_{12}a_{21} > 0 \\ a_{21}c_2 - a_{22}c_1 \geqslant 0 \end{array}$$

		$x_0$	$x_1$	$x_2$	$x_3$
$x_0$	$\frac{-a_{12}b_2 + a_{22}b_1}{a_{11}a_{22} - a_{12}a_{21}}$	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	$-\frac{a_{21}}{a_{11}a_{22}-a_{12}a_{21}}$	$\frac{a_{11}}{a_{11}a_{22} - a_{12}a_{21}}$
Ψ	$\frac{1}{a_{11}a_{22}-a_{12}a_{21}}\left(-a_{11}b_{2}c_{2}+a_{12}b_{2}c_{1}+a_{21}b_{1}c_{2}-a_{22}b_{1}c_{1}\right)$	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:  

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

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

$$x_2 = 0$$

$$x_3 = 0$$

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

### Table #0.-1

pots:

pot #0:

new:

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

all:

symbol  $b_2:(0,\infty)$ 

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

symbol  $b_1:(0,\infty)$ 

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

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

 $-c_1 + c_2 \geqslant 0$ 

 $a_{11}b_2 - a_{21}b_1 \geqslant 0$ 

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

pot #1:

new:

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

all:

symbol  $b_2:(0,\infty)$ 

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

symbol  $b_1:(0,\infty)$ 

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

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

$$-c_1 + c_2 \geqslant 0$$

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

		$x_0$	$x_1$	$x_2$	$x_3$
$x_0$	$\frac{b_1}{a_{11}}$	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
Ψ	$-\frac{b_{1}c_{1}}{a_{11}}$	0	$c_2 - \frac{a_{12}c_1}{a_{11}}$	$-\frac{c_1}{a_{11}}$	0

$$x_0 = \frac{b_1}{a_{11}} \\
 x_1 = 0$$

$$x_1 - 0$$

$$\begin{aligned}
x_2 &= 0 \\
x_1 &= b \end{aligned} \qquad a_{21}b$$

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

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

```
Table #1
```

Moving out basis:  $x_3$  from line: 1

Moving to basis:  $x_0$ 

pots: pot #0: new: symbol  $a_{11}:(0,\infty)$ symbol  $a_{21}:(0,\infty)$ symbol  $c_1:(-\infty,0)$  $-c_1 + c_2 \geqslant 0$  $-a_{11}b_2 + a_{21}b_1 \geqslant 0$ all: symbol  $b_2:(0,\infty)$ symbol  $a_{21}:(0,\infty)$ symbol  $b_1:(0,\infty)$ symbol  $c_1:(-\infty,0)$ symbol  $a_{11}:(0,\infty)$  $-c_1 + c_2 \geqslant 0$  $-a_{11}b_2 + a_{21}b_1 \geqslant 0$ pot #1: new: symbol  $a_{11}:(-\infty,0]$ symbol  $a_{21}:(0,\infty)$ symbol  $c_1: (-\infty, 0)$  $-c_1 + c_2 \geqslant 0$ all: symbol  $b_2:(0,\infty)$ symbol  $a_{21}:(0,\infty)$ symbol  $b_1:(0,\infty)$ symbol  $c_1: (-\infty, 0)$ symbol  $a_{11}:(-\infty,0]$ 

 $-c_1 + c_2 \geqslant 0$ 

		$x_0$	$x_1$	$x_2$	$x_3$
$x_2$	$-\frac{a_{11}b_2}{a_{21}} + b_1$	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	$\frac{1}{a_{21}}$
Ψ	$-rac{b_{2}c_{1}}{a_{21}}$	0	$c_2 - \frac{a_{22}c_1}{a_{21}}$	0	$-\frac{c_1}{a_{21}}$

```
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 \geqslant 0
all:
symbol b_2:(0,\infty)
symbol a_{21}:(0,\infty)
symbol b_1:(0,\infty)
symbol c_1:(-\infty,0)
symbol a_{11}:(0,\infty)
symbol a_{22}:(0,\infty)
-c_1 + c_2 \geqslant 0
-a_{11}b_2 + a_{21}b_1 \geqslant 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 \geqslant 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 b_2:(0,\infty)
symbol a_{21}:(0,\infty)
symbol b_1:(0,\infty)
symbol c_1:(-\infty,0)
symbol a_{11}:(0,\infty)
symbol a_{22}: (-\infty, 0]
-c_1 + c_2 \geqslant 0
-a_{11}b_2 + a_{21}b_1 \geqslant 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 \geqslant 0
all:
symbol b_2:(0,\infty)
symbol a_{21}:(0,\infty)
symbol b_1:(0,\infty)
```

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

Table #1.0

symbol  $a_{11}:(-\infty,0]$ symbol  $a_{22}:(0,\infty)$  $-c_1 + c_2 \geqslant 0$  $-a_{21}c_2 + a_{22}c_1 > 0$  $-a_{11}a_{22} + a_{12}a_{21} > 0$  $a_{12}b_2 - a_{22}b_1 \geqslant 0$ 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  $b_2:(0,\infty)$ symbol  $a_{21}:(0,\infty)$ symbol  $b_1:(0,\infty)$ symbol  $c_1: (-\infty, 0)$ symbol  $a_{11}: (-\infty, 0]$ symbol  $a_{22}:(-\infty,0]$  $-c_1 + c_2 \geqslant 0$  $-a_{21}c_2 + a_{22}c_1 > 0$  $-a_{11}a_{22} + a_{12}a_{21} > 0$ 

		$x_0$	$x_1$	$x_2$	$x_3$
$x_1$	$\frac{a_{11}b_2 - a_{21}b_1}{a_{11}a_{22} - a_{12}a_{21}}$	0	1	$-\frac{a_{21}}{a_{11}a_{22}-a_{12}a_{21}}$	$\frac{a_{11}}{a_{11}a_{22} - a_{12}a_{21}}$
$x_0$	$rac{-a_{12}b_2+a_{22}b_1}{a_{11}a_{22}-a_{12}a_{21}}$	1	0	$\frac{a_{22}}{a_{11}a_{22} - a_{12}a_{21}}$	$-\frac{a_{12}}{a_{11}a_{22}-a_{12}a_{21}}$
Ψ	$\frac{1}{a_{11}a_{22}-a_{12}a_{21}}\left(-a_{11}b_{2}c_{2}+a_{12}b_{2}c_{1}+a_{21}b_{1}c_{2}-a_{22}b_{1}c_{1}\right)$	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
```

Moving out basis:  $x_0$  from line: 1

Moving to basis:  $x_3$ 

pots: pot #0: new:

symbol  $a_{12}: (0, \infty)$  $-a_{11}c_2 + a_{12}c_1 > 0$ 

all:

symbol  $b_2:(0,\infty)$ 

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

symbol  $b_1:(0,\infty)$ 

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

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

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

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

 $-c_1 + c_2 \geqslant 0$ 

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

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

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

 $a_{12}b_2 - a_{22}b_1 \geqslant 0$ 

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

pot #1:

new:

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

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

all:

symbol  $b_2:(0,\infty)$ 

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

symbol  $b_1:(0,\infty)$ 

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

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

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

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

 $-c_1 + c_2 \geqslant 0$ 

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

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

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

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

		$x_0$	$x_1$	$x_2$	$x_3$
$x_1$	$\frac{b_1}{a_{12}}$	$\frac{a_{11}}{a_{12}}$	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
Ψ	$-\frac{b_{1}c_{2}}{a_{12}}$	$-\frac{a_{11}c_2}{a_{12}} + c_1$	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 #1.0.-1

pots:
pot #0:
new:
a_{11}c_2 - a_{12}c_1 \ge 0
all:
```

symbol  $b_2:(0,\infty)$ 

symbol  $a_{21}:(0,\infty)$ symbol  $b_1:(0,\infty)$ 

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

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

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

 $-c_1 + c_2 \geqslant 0$ 

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

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

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

 $a_{12}b_2 - a_{22}b_1 \geqslant 0$ 

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

pot #1:

new:

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

all:

symbol  $b_2:(0,\infty)$ 

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

symbol  $b_1:(0,\infty)$ 

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

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

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

 $-c_1 + c_2 \geqslant 0$ 

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

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

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

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

pot #2:

new:

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

all:

symbol  $b_2:(0,\infty)$ 

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

symbol  $b_1:(0,\infty)$ 

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

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

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

 $-c_1 + c_2 \geqslant 0$ 

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

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

 $a_{12}b_2 - a_{22}b_1 \geqslant 0$ 

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

pot #3:

new:

$$\begin{array}{l} a_{11}c_2 - a_{12}c_1 \geqslant 0 \\ \text{all:} \\ \text{symbol } b_2 : (0, \infty) \\ \text{symbol } a_{21} : (0, \infty) \\ \text{symbol } b_1 : (0, \infty) \\ \text{symbol } c_1 : (-\infty, 0) \\ \text{symbol } a_{11} : (-\infty, 0] \\ \text{symbol } a_{22} : (-\infty, 0] \\ -c_1 + c_2 \geqslant 0 \\ -a_{21}c_2 + a_{22}c_1 > 0 \\ -a_{11}a_{22} + a_{12}a_{21} > 0 \\ a_{11}c_2 - a_{12}c_1 \geqslant 0 \end{array}$$

		$x_0$	$x_1$	$x_2$	$x_3$
$x_1$	$rac{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	$\frac{a_{22}}{a_{11}a_{22} - a_{12}a_{21}}$	$-\frac{a_{12}}{a_{11}a_{22}-a_{12}a_{21}}$
Ψ	$\frac{1}{a_{11}a_{22}-a_{12}a_{21}}\left(-a_{11}b_{2}c_{2}+a_{12}b_{2}c_{1}+a_{21}b_{1}c_{2}-a_{22}b_{1}c_{1}\right)$	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:  

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

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

$$x_2 = 0$$

$$x_3 = 0$$

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

```
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 \geqslant 0
all:
symbol b_2:(0,\infty)
symbol a_{21}:(0,\infty)
symbol b_1:(0,\infty)
symbol c_1:(-\infty,0)
symbol a_{11}:(0,\infty)
symbol a_{22}:(0,\infty)
-c_1 + c_2 \geqslant 0
-a_{11}b_2 + a_{21}b_1 \geqslant 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 \geqslant 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} \geqslant 0
all:
symbol b_2:(0,\infty)
symbol a_{21}:(0,\infty)
symbol b_1:(0,\infty)
symbol c_1:(-\infty,0)
symbol a_{11}:(0,\infty)
symbol a_{22}:(0,\infty)
-c_1 + c_2 \geqslant 0
-a_{11}b_2 + a_{21}b_1 \geqslant 0
-a_{21}c_2 + a_{22}c_1 > 0
a_{11}a_{22} - a_{12}a_{21} \geqslant 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 \geqslant 0
all:
symbol b_2:(0,\infty)
symbol a_{21}:(0,\infty)
symbol b_1:(0,\infty)
```

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

Table #1.1

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

		$x_0$	$x_1$	$x_2$	$x_3$
$x_2$	$-\frac{a_{12}b_2}{a_{22}} + b_1$	$a_{11} - \frac{a_{12}a_{21}}{a_{22}}$	0	1	$-\frac{a_{12}}{a_{22}}$
$x_1$	$\frac{b_2}{a_{22}}$	$\frac{a_{21}}{a_{22}}$	1	0	$\frac{1}{a_{22}}$
Ψ	$-\frac{b_{2}c_{2}}{a_{22}}$	$-\frac{a_{21}c_2}{a_{22}}+c_1$	0	0	$-\frac{c_2}{a_{22}}$

$$x_0 = 0$$

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

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

$$x_3 = 0$$

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

### Table #1.-1

pots: pot #0: new:  $a_{21}c_2 - a_{22}c_1 \geqslant 0$ all: symbol  $b_2:(0,\infty)$ symbol  $a_{21}:(0,\infty)$ symbol  $b_1:(0,\infty)$ symbol  $c_1: (-\infty, 0)$ symbol  $a_{11}:(0,\infty)$  $-c_1 + c_2 \geqslant 0$  $-a_{11}b_2 + a_{21}b_1 \geqslant 0$  $a_{21}c_2 - a_{22}c_1 \geqslant 0$ pot #1: new:  $a_{21}c_2 - a_{22}c_1 \geqslant 0$ 

all:

symbol  $b_2:(0,\infty)$ symbol  $a_{21}:(0,\infty)$ symbol  $b_1:(0,\infty)$ symbol  $c_1: (-\infty, 0)$ symbol  $a_{11}: (-\infty, 0]$  $-c_1 + c_2 \geqslant 0$ 

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

		$x_0$	$x_1$	$x_2$	$x_3$
$x_2$	$-\frac{a_{11}b_2}{a_{21}} + b_1$	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	$\frac{1}{a_{21}}$
Ψ	$-rac{b_{2}c_{1}}{a_{21}}$	0	$c_2 - \frac{a_{22}c_1}{a_{21}}$	0	$-\frac{c_1}{a_{21}}$

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

$$x_1 = 0$$

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

$$x_3 = 0$$

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

```
Table #0
```

Moving out basis:  $x_2$  from line: 0

Moving to basis:  $x_1$ 

pots: pot #0: new: symbol  $a_{22}:(0,\infty)$ symbol  $a_{12}:(0,\infty)$ symbol  $c_2: (-\infty, 0)$  $c_1 - c_2 > 0$  $a_{12}b_2 - a_{22}b_1 \geqslant 0$ all: symbol  $b_2:(0,\infty)$ symbol  $a_{22}:(0,\infty)$ symbol  $b_1:(0,\infty)$ symbol  $a_{12}:(0,\infty)$ symbol  $c_2: (-\infty, 0)$  $c_1 - c_2 > 0$  $a_{12}b_2 - a_{22}b_1 \geqslant 0$ pot #1: new: symbol  $a_{22}:(-\infty,0]$ symbol  $a_{12}:(0,\infty)$ symbol  $c_2: (-\infty, 0)$  $c_1 - c_2 > 0$ all: symbol  $b_2:(0,\infty)$ symbol  $a_{22}: (-\infty, 0]$ symbol  $b_1:(0,\infty)$ symbol  $a_{12}:(0,\infty)$ 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
Ψ	$-rac{b_{1}c_{2}}{a_{12}}$	$-\frac{a_{11}c_2}{a_{12}} + c_1$	0	$-\frac{c_2}{a_{12}}$	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 \geqslant 0
all:
symbol b_2:(0,\infty)
symbol a_{11}:(0,\infty)
symbol b_1:(0,\infty)
symbol c_2:(-\infty,0)
symbol a_{12}:(0,\infty)
symbol a_{22}:(0,\infty)
c_1 - c_2 > 0
a_{12}b_2 - a_{22}b_1 \geqslant 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 \geqslant 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} \geqslant 0
all:
symbol b_2:(0,\infty)
symbol a_{11}:(0,\infty)
symbol b_1:(0,\infty)
symbol c_2:(-\infty,0)
symbol a_{12}:(0,\infty)
symbol a_{22}:(0,\infty)
c_1 - c_2 > 0
a_{12}b_2 - a_{22}b_1 \geqslant 0
a_{11}c_2 - a_{12}c_1 > 0
a_{11}a_{22} - a_{12}a_{21} \geqslant 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 \geqslant 0
all:
symbol b_2:(0,\infty)
symbol a_{11}:(0,\infty)
symbol b_1:(0,\infty)
```

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

Table #0.0

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

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

		$x_0$	$x_1$	$x_2$	$x_3$
$x_0$	$\frac{b_1}{a_{11}}$	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
Ψ	$-\frac{b_1c_1}{a_{11}}$	0	$c_2 - \frac{a_{12}c_1}{a_{11}}$	$-\frac{c_1}{a_{11}}$	0

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

$$x_1 = 0$$

$$x_2 = 0$$

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

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

```
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 \geqslant 0
all:
symbol b_2:(0,\infty)
symbol a_{11}:(0,\infty)
symbol b_1:(0,\infty)
symbol c_2:(-\infty,0)
symbol a_{12}:(0,\infty)
symbol a_{22}:(0,\infty)
c_1 - c_2 > 0
a_{12}b_2 - a_{22}b_1 \geqslant 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 \geqslant 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 b_2:(0,\infty)
symbol a_{11}: (-\infty, 0]
symbol b_1:(0,\infty)
```

symbol  $c_2: (-\infty, 0)$ symbol  $a_{12}: (0, \infty)$ symbol  $a_{22}: (0, \infty)$ 

 $c_1 - c_2 > 0$ 

pot #2: new:

all:

 $a_{12}b_2 - a_{22}b_1 \geqslant 0$   $a_{11}c_2 - a_{12}c_1 > 0$   $-a_{11}a_{22} + a_{12}a_{21} > 0$ 

symbol  $a_{11}: (0, \infty)$   $a_{11}c_2 - a_{12}c_1 > 0$   $-a_{11}a_{22} + a_{12}a_{21} > 0$  $-a_{11}b_2 + a_{21}b_1 \geqslant 0$ 

symbol  $b_2: (0, \infty)$ symbol  $a_{11}: (0, \infty)$ symbol  $b_1: (0, \infty)$ symbol  $c_2: (-\infty, 0)$  symbol  $a_{12}:(0,\infty)$ symbol  $a_{22}:(-\infty,0]$  $c_1 - c_2 > 0$  $a_{11}c_2 - a_{12}c_1 > 0$  $-a_{11}a_{22} + a_{12}a_{21} > 0$  $-a_{11}b_2 + a_{21}b_1 \geqslant 0$ 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  $b_2:(0,\infty)$ symbol  $a_{11}: (-\infty, 0]$ symbol  $b_1:(0,\infty)$ symbol  $c_2: (-\infty, 0)$ symbol  $a_{12}:(0,\infty)$ symbol  $a_{22}:(-\infty,0]$  $c_1 - c_2 > 0$  $a_{11}c_2 - a_{12}c_1 > 0$  $-a_{11}a_{22} + a_{12}a_{21} > 0$ 

		$x_0$	$x_1$	$x_2$	$x_3$
$x_1$	$\frac{a_{11}b_2 - a_{21}b_1}{a_{11}a_{22} - a_{12}a_{21}}$	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	$\frac{a_{22}}{a_{11}a_{22} - a_{12}a_{21}}$	$-\frac{a_{12}}{a_{11}a_{22}-a_{12}a_{21}}$
Ψ	$\frac{1}{a_{11}a_{22}-a_{12}a_{21}}\left(-a_{11}b_{2}c_{2}+a_{12}b_{2}c_{1}+a_{21}b_{1}c_{2}-a_{22}b_{1}c_{1}\right)$	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:  $x_1$  from line: 0

Moving to basis:  $x_2$ 

pots: pot #0:

new:

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

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

all:

symbol  $b_2:(0,\infty)$ 

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

symbol  $b_1:(0,\infty)$ 

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

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

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

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

 $c_1 - c_2 > 0$ 

 $a_{12}b_2 - a_{22}b_1 \geqslant 0$ 

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

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

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

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

pot #1:

new:

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

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

all:

symbol  $b_2:(0,\infty)$ 

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

symbol  $b_1:(0,\infty)$ 

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

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

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

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

 $c_1 - c_2 > 0$ 

 $a_{12}b_2 - a_{22}b_1 \geqslant 0$ 

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

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

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

		$x_0$	$x_1$	$x_2$	$x_3$
$x_2$	$-\frac{a_{11}b_2}{a_{21}} + b_1$	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	$\frac{1}{a_{21}}$
Ψ	$-rac{b_{2}c_{1}}{a_{21}}$	0	$c_2 - \frac{a_{22}c_1}{a_{21}}$	0	$-\frac{c_1}{a_{21}}$

$$x_0 = \frac{b_2}{a_{21}} \\
 x_1 = 0$$

$$x_1 = 0$$

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

$$x_3 = 0$$

$$\Psi = -\frac{b_2 c_1}{a_{21}}$$

```
Table #0.1.-1
```

```
pots:
pot #0:
new:
-a_{21}c_2 + a_{22}c_1 \geqslant 0
symbol b_2:(0,\infty)
symbol a_{11}:(0,\infty)
symbol b_1:(0,\infty)
symbol c_2:(-\infty,0)
symbol a_{12}:(0,\infty)
symbol a_{22}:(0,\infty)
c_1 - c_2 > 0
a_{12}b_2 - a_{22}b_1 \geqslant 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 \geqslant 0
-a_{21}c_2 + a_{22}c_1 \geqslant 0
pot #1:
new:
-a_{21}c_2 + a_{22}c_1 \geqslant 0
all:
symbol b_2:(0,\infty)
symbol a_{11}:(-\infty,0]
symbol b_1:(0,\infty)
symbol c_2:(-\infty,0)
symbol a_{12}:(0,\infty)
symbol a_{22}:(0,\infty)
c_1 - c_2 > 0
a_{12}b_2 - a_{22}b_1 \geqslant 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 \geqslant 0
pot #2:
new:
-a_{21}c_2 + a_{22}c_1 \geqslant 0
all:
symbol b_2:(0,\infty)
symbol a_{11}:(0,\infty)
symbol b_1:(0,\infty)
symbol c_2: (-\infty, 0)
symbol a_{12}:(0,\infty)
symbol a_{22}: (-\infty, 0]
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 \geqslant 0
-a_{21}c_2 + a_{22}c_1 \geqslant 0
pot #3:
new:
```

$$\begin{array}{l} -a_{21}c_2 + a_{22}c_1 \geqslant 0 \\ \text{all:} \\ \text{symbol } b_2 : (0, \infty) \\ \text{symbol } a_{11} : (-\infty, 0] \\ \text{symbol } b_1 : (0, \infty) \\ \text{symbol } c_2 : (-\infty, 0) \\ \text{symbol } a_{12} : (0, \infty) \\ \text{symbol } a_{12} : (-\infty, 0] \\ c_1 - c_2 > 0 \\ a_{11}c_2 - a_{12}c_1 > 0 \\ -a_{11}a_{22} + a_{12}a_{21} > 0 \\ -a_{21}c_2 + a_{22}c_1 \geqslant 0 \end{array}$$

		$x_0$	$x_1$	$x_2$	$x_3$
$x_1$	$rac{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	$\frac{a_{22}}{a_{11}a_{22} - a_{12}a_{21}}$	$-\frac{a_{12}}{a_{11}a_{22}-a_{12}a_{21}}$
Ψ	$\frac{1}{a_{11}a_{22}-a_{12}a_{21}}\left(-a_{11}b_{2}c_{2}+a_{12}b_{2}c_{1}+a_{21}b_{1}c_{2}-a_{22}b_{1}c_{1}\right)$	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:  

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

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

$$x_2 = 0$$

$$x_3 = 0$$

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

### Table #0.-1

pots: pot #0: new:  $-a_{11}c_2 + a_{12}c_1 \geqslant 0$ all: symbol  $b_2:(0,\infty)$ symbol  $a_{22}:(0,\infty)$ symbol  $b_1:(0,\infty)$ symbol  $a_{12}:(0,\infty)$ symbol  $c_2: (-\infty, 0)$  $c_1 - c_2 > 0$  $a_{12}b_2 - a_{22}b_1 \geqslant 0$  $-a_{11}c_2 + a_{12}c_1 \geqslant 0$ pot #1: new:  $-a_{11}c_2 + a_{12}c_1 \geqslant 0$ all: symbol  $b_2:(0,\infty)$ symbol  $a_{22}:(-\infty,0]$ symbol  $b_1:(0,\infty)$ symbol  $a_{12}:(0,\infty)$ 

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

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

 $c_1 - c_2 > 0$ 

		$x_0$	$x_1$	$x_2$	$x_3$
$x_1$	$\frac{b_1}{a_{12}}$	$\frac{a_{11}}{a_{12}}$	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
Ψ	$-\frac{b_1c_2}{a_{12}}$	$-\frac{a_{11}c_2}{a_{12}}+c_1$	0	$-\frac{c_2}{a_{12}}$	0

$$x_0 = 0$$

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

$$x_2 = 0$$

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

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

```
Table #1
```

Moving out basis:  $x_3$  from line: 1

Moving to basis:  $x_1$ 

pots: pot #0: new: symbol  $a_{22}:(0,\infty)$ symbol  $a_{12}:(0,\infty)$ symbol  $c_2: (-\infty, 0)$  $c_1 - c_2 > 0$  $-a_{12}b_2 + a_{22}b_1 \geqslant 0$ all: symbol  $b_2:(0,\infty)$ symbol  $a_{22}:(0,\infty)$ symbol  $b_1:(0,\infty)$ symbol  $a_{12}:(0,\infty)$ symbol  $c_2: (-\infty, 0)$  $c_1 - c_2 > 0$  $-a_{12}b_2 + a_{22}b_1 \geqslant 0$ pot #1: new: symbol  $a_{22}:(0,\infty)$ symbol  $a_{12}:(-\infty,0]$ symbol  $c_2: (-\infty, 0)$  $c_1 - c_2 > 0$ all: symbol  $b_2:(0,\infty)$ symbol  $b_1:(0,\infty)$ symbol  $a_{22}:(0,\infty)$ symbol  $a_{12}:(-\infty,0]$ symbol  $c_2: (-\infty, 0)$ 

 $c_1 - c_2 > 0$ 

		$x_0$	$x_1$	$x_2$	$x_3$
$x_2$	$-\frac{a_{12}b_2}{a_{22}} + b_1$	$a_{11} - \frac{a_{12}a_{21}}{a_{22}}$	0	1	$-\frac{a_{12}}{a_{22}}$
$x_1$	$\frac{b_2}{a_{22}}$	$\frac{a_{21}}{a_{22}}$	1	0	$\frac{1}{a_{22}}$
Ψ	$-rac{b_{2}c_{2}}{a_{22}}$	$-\frac{a_{21}c_2}{a_{22}}+c_1$	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 \geqslant 0
all:
symbol b_2:(0,\infty)
symbol a_{21}:(0,\infty)
symbol b_1:(0,\infty)
symbol c_2:(-\infty,0)
symbol a_{12}:(0,\infty)
symbol a_{22}:(0,\infty)
c_1 - c_2 > 0
-a_{12}b_2 + a_{22}b_1 \geqslant 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 \geqslant 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 b_2:(0,\infty)
symbol a_{21}:(-\infty,0]
symbol b_1:(0,\infty)
symbol c_2:(-\infty,0)
symbol a_{12}:(0,\infty)
symbol a_{22}:(0,\infty)
c_1 - c_2 > 0
-a_{12}b_2 + a_{22}b_1 \geqslant 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
```

 $a_{11}b_2 - a_{21}b_1 \geqslant 0$ 

symbol  $b_2: (0, \infty)$ symbol  $a_{21}: (0, \infty)$ symbol  $b_1: (0, \infty)$ symbol  $c_2: (-\infty, 0)$ 

all:

symbol  $a_{12}:(-\infty,0]$ symbol  $a_{22}:(0,\infty)$  $c_1 - c_2 > 0$  $a_{21}c_2 - a_{22}c_1 > 0$  $a_{11}a_{22} - a_{12}a_{21} > 0$  $a_{11}b_2 - a_{21}b_1 \geqslant 0$ 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  $b_2:(0,\infty)$ symbol  $a_{21}:(-\infty,0]$ symbol  $b_1:(0,\infty)$ symbol  $c_2: (-\infty, 0)$ symbol  $a_{12}:(-\infty,0]$ symbol  $a_{22}:(0,\infty)$  $c_1 - c_2 > 0$  $a_{21}c_2 - a_{22}c_1 > 0$  $a_{11}a_{22} - a_{12}a_{21} > 0$ 

		$x_0$	$x_1$	$x_2$	$x_3$
$x_0$	$\frac{-a_{12}b_2 + a_{22}b_1}{a_{11}a_{22} - a_{12}a_{21}}$	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	$-\frac{a_{21}}{a_{11}a_{22}-a_{12}a_{21}}$	$\frac{a_{11}}{a_{11}a_{22} - a_{12}a_{21}}$
Ψ	$\frac{1}{a_{11}a_{22}-a_{12}a_{21}}\left(-a_{11}b_{2}c_{2}+a_{12}b_{2}c_{1}+a_{21}b_{1}c_{2}-a_{22}b_{1}c_{1}\right)$	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
```

Moving out basis:  $x_1$  from line: 1

Moving to basis:  $x_3$ 

pots: pot #0:

new:

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

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

all:

symbol  $b_2:(0,\infty)$ 

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

symbol  $b_1:(0,\infty)$ 

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

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

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

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

 $c_1 - c_2 > 0$ 

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

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

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

 $a_{11}b_2 - a_{21}b_1 \geqslant 0$ 

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

pot #1:

new:

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

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

all:

symbol  $b_2:(0,\infty)$ 

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

symbol  $b_1:(0,\infty)$ 

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

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

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

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

 $c_1 - c_2 > 0$ 

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

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

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

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

		$x_0$	$x_1$	$x_2$	$x_3$
$x_0$	$\frac{b_1}{a_{11}}$	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
Ψ	$-\frac{b_{1}c_{1}}{a_{11}}$	0	$c_2 - \frac{a_{12}c_1}{a_{11}}$	$-\frac{c_1}{a_{11}}$	0

Solution:

$$\begin{array}{c} x_0 = \frac{b_1}{a_{11}} \\ x_1 = 0 \end{array}$$

$$r_1 = 0$$

 $x_2 = 0$ 

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

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

```
Table #1.0.-1
```

```
pots:
pot #0:
new:
-a_{11}c_2 + a_{12}c_1 \geqslant 0
symbol b_2:(0,\infty)
symbol a_{21}:(0,\infty)
symbol b_1:(0,\infty)
symbol c_2:(-\infty,0)
symbol a_{12}:(0,\infty)
symbol a_{22}:(0,\infty)
c_1 - c_2 > 0
-a_{12}b_2 + a_{22}b_1 \geqslant 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 \geqslant 0
-a_{11}c_2 + a_{12}c_1 \geqslant 0
pot #1:
new:
-a_{11}c_2 + a_{12}c_1 \geqslant 0
all:
symbol b_2:(0,\infty)
symbol a_{21}:(-\infty,0]
symbol b_1:(0,\infty)
symbol c_2:(-\infty,0)
symbol a_{12}:(0,\infty)
symbol a_{22}:(0,\infty)
c_1 - c_2 > 0
-a_{12}b_2 + a_{22}b_1 \geqslant 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 \geqslant 0
pot #2:
new:
-a_{11}c_2 + a_{12}c_1 \geqslant 0
all:
symbol b_2:(0,\infty)
symbol a_{21}:(0,\infty)
symbol b_1:(0,\infty)
symbol c_2: (-\infty, 0)
symbol a_{12}: (-\infty, 0]
symbol a_{22}:(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 \geqslant 0
-a_{11}c_2 + a_{12}c_1 \geqslant 0
pot #3:
new:
```

$$\begin{aligned} -a_{11}c_2 + a_{12}c_1 &\geqslant 0 \\ \text{all:} \\ \text{symbol } b_2 : (0, \infty) \\ \text{symbol } a_{21} : (-\infty, 0] \\ \text{symbol } b_1 : (0, \infty) \\ \text{symbol } c_2 : (-\infty, 0) \\ \text{symbol } a_{12} : (-\infty, 0] \\ \text{symbol } a_{22} : (0, \infty) \\ c_1 - c_2 &> 0 \\ a_{21}c_2 - a_{22}c_1 &> 0 \\ a_{11}a_{22} - a_{12}a_{21} &> 0 \\ -a_{11}c_2 + a_{12}c_1 &\geqslant 0 \end{aligned}$$

		$x_0$	$x_1$	$x_2$	$x_3$
$x_0$	$\frac{-a_{12}b_2 + a_{22}b_1}{a_{11}a_{22} - a_{12}a_{21}}$	1	0	$\frac{a_{22}}{a_{11}a_{22} - a_{12}a_{21}}$	$-rac{a_{12}}{a_{11}a_{22}-a_{12}a_{21}}$
$x_1$	$\frac{a_{11}b_2 - a_{21}b_1}{a_{11}a_{22} - a_{12}a_{21}}$	0	1	$-rac{a_{21}}{a_{11}a_{22}-a_{12}a_{21}}$	$\frac{a_{11}}{a_{11}a_{22} - a_{12}a_{21}}$
Ψ	$\frac{1}{a_{11}a_{22}-a_{12}a_{21}}\left(-a_{11}b_{2}c_{2}+a_{12}b_{2}c_{1}+a_{21}b_{1}c_{2}-a_{22}b_{1}c_{1}\right)$	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:  

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

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

$$x_2 = 0$$

$$x_3 = 0$$

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

### Table #1.1Moving out basis: $x_1$ from line: 1 Moving to basis: $x_0$ pots: pot #0: new: symbol $a_{21}:(0,\infty)$ $a_{21}c_2 - a_{22}c_1 > 0$ $a_{11}a_{22} - a_{12}a_{21} > 0$ $-a_{11}b_2 + a_{21}b_1 \geqslant 0$ all: symbol $b_2:(0,\infty)$ symbol $a_{21}:(0,\infty)$ symbol $b_1:(0,\infty)$ symbol $c_2:(-\infty,0)$ symbol $a_{12}:(0,\infty)$ symbol $a_{22}:(0,\infty)$ $c_1 - c_2 > 0$ $-a_{12}b_2 + a_{22}b_1 \geqslant 0$ $a_{21}c_2 - a_{22}c_1 > 0$ $a_{11}a_{22} - a_{12}a_{21} > 0$ $-a_{11}b_2 + a_{21}b_1 \geqslant 0$ pot #1: new: symbol $a_{21}:(0,\infty)$ $a_{21}c_2 - a_{22}c_1 > 0$ $-a_{11}a_{22} + a_{12}a_{21} \geqslant 0$ all: symbol $b_2:(0,\infty)$ symbol $a_{21}:(0,\infty)$ symbol $b_1:(0,\infty)$ symbol $c_2:(-\infty,0)$ symbol $a_{12}:(0,\infty)$ symbol $a_{22}:(0,\infty)$

 $c_1 - c_2 > 0$ 

pot #2: new:

all:

 $-a_{12}b_2 + a_{22}b_1 \geqslant 0$   $a_{21}c_2 - a_{22}c_1 > 0$   $-a_{11}a_{22} + a_{12}a_{21} \geqslant 0$ 

symbol  $a_{21}: (0, \infty)$   $a_{21}c_2 - a_{22}c_1 > 0$   $a_{11}a_{22} - a_{12}a_{21} > 0$  $-a_{11}b_2 + a_{21}b_1 \geqslant 0$ 

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

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

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

$$x_1 = 0$$

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

$$x_3 = 0$$

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

### Table #1.-1

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

pot #1: new:

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

all:

symbol  $b_2:(0,\infty)$ symbol  $a_{22}:(0,\infty)$ symbol  $b_1:(0,\infty)$ symbol  $a_{12}: (-\infty, 0]$ symbol  $c_2: (-\infty, 0)$ 

$$c_1 - c_2 > 0$$

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

		$x_0$	$x_1$	$x_2$	$x_3$
$x_2$	$-\frac{a_{12}b_2}{a_{22}} + b_1$	$a_{11} - \frac{a_{12}a_{21}}{a_{22}}$	0	1	$-\frac{a_{12}}{a_{22}}$
$x_1$	$\frac{b_2}{a_{22}}$	$rac{a_{21}}{a_{22}}$	1	0	$\frac{1}{a_{22}}$
Ψ	$-rac{b_{2}c_{2}}{a_{22}}$	$-\frac{a_{21}c_2}{a_{22}}+c_1$	0	0	$-\frac{c_2}{a_{22}}$

$$x_0 = 0$$

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

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

$$x_3 = 0$$

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

## Table #-1

pots: pot #0:

new:

symbol  $c_2: [0, \infty)$ symbol  $c_1:[0,\infty)$ 

all:

symbol  $b_2:(0,\infty)$ symbol  $b_1:(0,\infty)$ symbol  $c_2:[0,\infty)$ symbol  $c_1:[0,\infty)$ 

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

### Solution:

 $x_0 = 0$ 

 $x_1 = 0$ 

 $x_2 = b_1$ 

 $x_3 = b_2$   $\Psi = 0$