

Table # initial

pots:
pot #0:
symbol $b_2 : [0,inf)$
symbol $b_1 : [0,inf)$

| | | | | | |
|--------|-------|----------|----------|-------|-------|
| | | 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:

symbol b_2 : $[0, inf)$

symbol a_{11} : $(0, inf)$

symbol b_1 : $[0, inf)$

symbol c_1 : $(-inf, 0)$

symbol a_{21} : $(0, inf)$

$-c_1 + c_2 \geq 0$

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

pot #1:

symbol b_2 : $[0, inf)$

symbol a_{11} : $(0, inf)$

symbol b_1 : $[0, inf)$

symbol c_1 : $(-inf, 0)$

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

$-c_1 + c_2 \geq 0$

| | | 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 |
| Ψ | $-\frac{b_1c_1}{a_{11}}$ | 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:

symbol b_2 : $[0, inf)$

symbol a_{11} : $(0, inf)$

symbol b_1 : $[0, inf)$

symbol c_1 : $(-inf, 0)$

symbol a_{21} : $(0, inf)$

symbol a_{12} : $(0, inf)$

$-c_1 + c_2 \geq 0$

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

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

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

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

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

pot #1:

symbol b_2 : $[0, inf)$

symbol a_{11} : $(0, inf)$

symbol b_1 : $[0, inf)$

symbol c_1 : $(-inf, 0)$

symbol a_{21} : $(0, inf)$

symbol a_{12} : $(0, inf)$

$-c_1 + c_2 \geq 0$

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

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

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

pot #2:

symbol b_2 : $[0, inf)$

symbol a_{11} : $(0, inf)$

symbol b_1 : $[0, inf)$

symbol c_1 : $(-inf, 0)$

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

symbol a_{12} : $(0, inf)$

$-c_1 + c_2 \geq 0$

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

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

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

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

pot #3:

symbol b_2 : $[0, inf)$

symbol a_{11} : $(0, inf)$

symbol b_1 : $[0, inf)$

symbol c_1 : $(-inf, 0)$

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

symbol a_{12} : $(0, inf)$

$-c_1 + c_2 \geq 0$

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

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

| | | | | | |
|--------|--------------------------------------|---|-------|--------------------------|-------|
| | | 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 | $\frac{a_{12}b_2-a_{22}b_1}{a_{12}}$ | $\frac{-a_{11}a_{22}+a_{12}a_{21}}{a_{12}}$ | 0 | $-\frac{a_{22}}{a_{12}}$ | 1 |
| Ψ | $-\frac{b_1c_2}{a_{12}}$ | $\frac{-a_{11}c_2+a_{12}c_1}{a_{12}}$ | 0 | $-\frac{c_2}{a_{12}}$ | 0 |

Solution:

$$x_0 = 0$$

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

$$x_2 = 0$$

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

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

Table #0.1

Moving out basis: x_3 from line: 1

Moving to basis: x_1

pots:

pot #0:

symbol b_2 : $[0, inf)$

symbol a_{11} : $(0, inf)$

symbol b_1 : $[0, inf)$

symbol c_1 : $(-inf, 0)$

symbol a_{21} : $(0, inf)$

symbol a_{12} : $(0, inf)$

$-c_1 + c_2 \geq 0$

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

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

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

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

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

pot #1:

symbol b_2 : $[0, inf)$

symbol a_{11} : $(0, inf)$

symbol b_1 : $[0, inf)$

symbol c_1 : $(-inf, 0)$

symbol a_{21} : $(0, inf)$

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

$-c_1 + c_2 \geq 0$

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

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

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

pot #2:

symbol b_2 : $[0, inf)$

symbol a_{11} : $(0, inf)$

symbol b_1 : $[0, inf)$

symbol c_1 : $(-inf, 0)$

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

symbol a_{12} : $(0, inf)$

$-c_1 + c_2 \geq 0$

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

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

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

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

pot #3:

symbol b_2 : $[0, inf)$

symbol a_{11} : $(0, inf)$

symbol b_1 : $[0, inf)$

symbol c_1 : $(-inf, 0)$

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

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

$-c_1 + c_2 \geq 0$

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

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

| | | 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 | $\frac{a_{21}}{-a_{11}a_{22}+a_{12}a_{21}}$ | $\frac{a_{11}}{a_{11}a_{22}-a_{12}a_{21}}$ |
| Ψ | $\frac{-a_{11}b_2c_2+a_{12}b_2c_1+a_{21}b_1c_2-a_{22}b_1c_1}{a_{11}a_{22}-a_{12}a_{21}}$ | 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:

symbol b_2 : $[0, inf)$

symbol a_{11} : $(0, inf)$

symbol b_1 : $[0, inf)$

symbol c_1 : $(-inf, 0)$

symbol a_{21} : $(0, inf)$

symbol a_{12} : $(0, inf)$

symbol a_{22} : $(0, inf)$

$-c_1 + c_2 \geq 0$

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

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

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

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

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

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

pot #1:

symbol b_2 : $[0, inf)$

symbol a_{11} : $(0, inf)$

symbol b_1 : $[0, inf)$

symbol c_1 : $(-inf, 0)$

symbol a_{21} : $(-inf, 0)$

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

symbol a_{22} : $(0, inf)$

$-c_1 + c_2 \geq 0$

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

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

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

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

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

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

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

Table #0.1.0.0

Moving out basis: x_2 from line: 0

Moving to basis: x_3

pots:

pot #0:

symbol b_2 : $[0, inf)$

symbol a_{11} : $(0, inf)$

symbol b_1 : 0

symbol c_1 : $(-inf, 0)$

symbol a_{21} : $(-inf, 0)$

symbol c_2 : $(0, inf)$

symbol a_{12} : $(-inf, 0)$

symbol a_{22} : $(0, inf)$

$-c_1 + c_2 \geq 0$

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

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

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

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

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

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

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

Table #0.1.0.1

Moving out basis: x_1 from line: 1

Moving to basis: x_3

pots:

pot #0:

symbol b_2 : $[0, inf)$

symbol a_{11} : $(0, inf)$

symbol b_1 : $[0, inf)$

symbol c_1 : $(-inf, 0)$

symbol a_{21} : $(-inf, 0)$

symbol c_2 : $(0, inf)$

symbol a_{12} : $(-inf, 0)$

symbol a_{22} : $(0, inf)$

$-c_1 + c_2 \geq 0$

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

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

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

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

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

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

| | | | | | |
|--------|-------|----------|----------|-------|-------|
| | | 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 #0.1.0.-1

pots:

pot #0:

symbol b_2 : $[0, inf)$

symbol a_{11} : $(0, inf)$

symbol b_1 : $[0, inf)$

symbol c_1 : $(-inf, 0)$

symbol a_{21} : $(0, inf)$

symbol c_2 : $(-inf, 0]$

symbol a_{12} : $(0, inf)$

symbol a_{22} : $(0, inf)$

$-c_1 + c_2 \geq 0$

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

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

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

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

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

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

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

Table #0.1.1

Moving out basis: x_1 from line: 1

Moving to basis: x_2

pots:

pot #0:

symbol b_2 : $[0, inf)$

symbol a_{11} : $(0, inf)$

symbol b_1 : $[0, inf)$

symbol c_1 : $(-inf, 0)$

symbol a_{21} : $(-inf, 0)$

symbol a_{12} : $(0, inf)$

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

$-c_1 + c_2 \geq 0$

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

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

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

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

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

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

pot #1:

symbol b_2 : 0

symbol a_{11} : $(0, inf)$

symbol b_1 : $[0, inf)$

symbol c_1 : $(-inf, 0)$

symbol a_{21} : $(-inf, 0)$

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

symbol a_{22} : $(0, inf)$

$-c_1 + c_2 \geq 0$

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

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

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

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

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

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

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

Table #0.1.1.1

Moving out basis: x_2 from line: 1

Moving to basis: x_3

pots:

pot #0:

symbol $b_2 : [0, inf)$

symbol $a_{11} : (0, inf)$

symbol $b_1 : [0, inf)$

symbol $c_1 : (-inf, 0)$

symbol $a_{21} : (-inf, 0)$

symbol $a_{12} : (0, inf)$

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

$$-c_1 + c_2 \geq 0$$

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

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

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

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

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

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

pot #1:

symbol $b_2 : 0$

symbol $a_{11} : (0, inf)$

symbol $b_1 : [0, inf)$

symbol $c_1 : (-inf, 0)$

symbol $a_{21} : (-inf, 0)$

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

symbol $a_{22} : (0, inf)$

$$-c_1 + c_2 \geq 0$$

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

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

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

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

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

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

| | | 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 | $\frac{a_{11}b_2 - a_{21}b_1}{a_{11}}$ | 0 | $\frac{a_{11}a_{22} - a_{12}a_{21}}{a_{11}}$ | $-\frac{a_{21}}{a_{11}}$ | 1 |
| Ψ | $-\frac{b_1c_1}{a_{11}}$ | 0 | $\frac{a_{11}c_2 - a_{12}c_1}{a_{11}}$ | $-\frac{c_1}{a_{11}}$ | 0 |

Table #0.1.-1

pots:

pot #0:

symbol $b_2 : [0, inf)$

symbol $a_{11} : (0, inf)$

symbol $b_1 : [0, inf)$

symbol $c_1 : (-inf, 0)$

symbol $a_{21} : (0, inf)$

symbol $a_{12} : (0, inf)$

$-c_1 + c_2 \geq 0$

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

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

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

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

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

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

pot #1:

symbol $b_2 : [0, inf)$

symbol $a_{11} : (0, inf)$

symbol $b_1 : [0, inf)$

symbol $c_1 : (-inf, 0)$

symbol $a_{21} : (0, inf)$

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

$-c_1 + c_2 \geq 0$

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

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

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

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

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

pot #2:

symbol $b_2 : [0, inf)$

symbol $a_{11} : (0, inf)$

symbol $b_1 : [0, inf)$

symbol $c_1 : (-inf, 0)$

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

symbol $a_{12} : (0, inf)$

$-c_1 + c_2 \geq 0$

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

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

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

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

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

pot #3:

symbol $b_2 : [0, inf)$

symbol $a_{11} : (0, inf)$

symbol $b_1 : [0, inf)$

symbol $c_1 : (-inf, 0)$

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

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

$-c_1 + c_2 \geq 0$

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

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

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

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

| | | 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 | $\frac{-a_{11}b_2c_2+a_{12}b_2c_1+a_{21}b_1c_2-a_{22}b_1c_1}{a_{11}a_{22}-a_{12}a_{21}}$ | 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:

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

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

$$x_2 = 0$$

$$x_3 = 0$$

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

Table #0.-1

pots:

pot #0:

symbol $b_2 : [0, inf)$

symbol $a_{11} : (0, inf)$

symbol $b_1 : [0, inf)$

symbol $c_1 : (-inf, 0)$

symbol $a_{21} : (0, inf)$

$-c_1 + c_2 \geq 0$

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

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

pot #1:

symbol $b_2 : [0, inf)$

symbol $a_{11} : (0, inf)$

symbol $b_1 : [0, inf)$

symbol $c_1 : (-inf, 0)$

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

$-c_1 + c_2 \geq 0$

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

| | | 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 |
| Ψ | $-\frac{b_1c_1}{a_{11}}$ | 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 #1

Moving out basis: x_3 from line: 1

Moving to basis: x_0

pots:

pot #0:

symbol b_2 : $[0, inf)$

symbol a_{21} : $(0, inf)$

symbol b_1 : $[0, inf)$

symbol c_1 : $(-inf, 0)$

symbol a_{11} : $(0, inf)$

$-c_1 + c_2 \geq 0$

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

pot #1:

symbol b_2 : $[0, inf)$

symbol a_{21} : $(0, inf)$

symbol b_1 : $[0, inf)$

symbol c_1 : $(-inf, 0)$

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

$-c_1 + c_2 \geq 0$

| | | x_0 | x_1 | x_2 | x_3 |
|--------|---|-------|---|-------|--------------------------|
| x_2 | $-\frac{a_{11}b_2 - a_{21}b_1}{a_{21}}$ | 0 | $-\frac{a_{11}a_{22} - a_{12}a_{21}}{a_{21}}$ | 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 | $-\frac{c_1}{a_{21}}$ |

Table #1.0

Moving out basis: x_2 from line: 0

Moving to basis: x_1

pots:

pot #0:

symbol b_2 : $[0, inf)$

symbol a_{21} : $(0, inf)$

symbol b_1 : $[0, inf)$

symbol c_1 : $(-inf, 0)$

symbol a_{11} : $(0, inf)$

symbol a_{22} : $(0, inf)$

$-c_1 + c_2 \geq 0$

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

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

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

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

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

pot #1:

symbol b_2 : $[0, inf)$

symbol a_{21} : $(0, inf)$

symbol b_1 : $[0, inf)$

symbol c_1 : $(-inf, 0)$

symbol a_{11} : $(0, inf)$

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

$-c_1 + c_2 \geq 0$

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

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

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

pot #2:

symbol b_2 : $[0, inf)$

symbol a_{21} : $(0, inf)$

symbol b_1 : $[0, inf)$

symbol c_1 : $(-inf, 0)$

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

symbol a_{22} : $(0, inf)$

$-c_1 + c_2 \geq 0$

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

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

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

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

pot #3:

symbol b_2 : $[0, inf)$

symbol a_{21} : $(0, inf)$

symbol b_1 : $[0, inf)$

symbol c_1 : $(-inf, 0)$

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

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

$-c_1 + c_2 \geq 0$

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

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

| | | 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 | $\frac{a_{22}}{a_{11}a_{22} - a_{12}a_{21}}$ | $\frac{a_{12}}{-a_{11}a_{22} + a_{12}a_{21}}$ |
| Ψ | $\frac{-a_{11}b_2c_2 + a_{12}b_2c_1 + a_{21}b_1c_2 - a_{22}b_1c_1}{a_{11}a_{22} - a_{12}a_{21}}$ | 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 #1.0.0

Moving out basis: x_1 from line: 0

Moving to basis: x_3

pots:

pot #0:

symbol b_2 : $[0, inf)$

symbol a_{21} : $(0, inf)$

symbol b_1 : $[0, inf)$

symbol c_1 : $(-inf, 0)$

symbol a_{11} : $(-inf, 0)$

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

symbol a_{22} : $(0, inf)$

$-c_1 + c_2 \geq 0$

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

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

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

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

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

pot #1:

symbol b_2 : $[0, inf)$

symbol a_{21} : $(0, inf)$

symbol b_1 : 0

symbol c_1 : $(-inf, 0)$

symbol a_{11} : $(-inf, 0)$

symbol a_{12} : $(0, inf)$

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

$-c_1 + c_2 \geq 0$

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

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

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

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

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

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

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

Table #1.0.0.0

Moving out basis: x_3 from line: 0

Moving to basis: x_2

pots:

pot #0:

symbol b_2 : $[0, inf)$

symbol a_{21} : $(0, inf)$

symbol b_1 : $[0, inf)$

symbol c_1 : $(-inf, 0)$

symbol a_{11} : $(-inf, 0)$

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

symbol a_{22} : $(0, inf)$

$-c_1 + c_2 \geq 0$

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

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

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

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

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

pot #1:

symbol b_2 : $[0, inf)$

symbol a_{21} : $(0, inf)$

symbol b_1 : 0

symbol c_1 : $(-inf, 0)$

symbol a_{11} : $(-inf, 0)$

symbol a_{12} : $(0, inf)$

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

$-c_1 + c_2 \geq 0$

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

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

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

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

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

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

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

Table #1.0.1

Moving out basis: x_0 from line: 1

Moving to basis: x_3

pots:

pot #0:

symbol b_2 : $[0, inf)$

symbol a_{21} : $(0, inf)$

symbol b_1 : $[0, inf)$

symbol c_1 : $(-inf, 0)$

symbol a_{11} : $(0, inf)$

symbol a_{12} : $(0, inf)$

symbol a_{22} : $(0, inf)$

$-c_1 + c_2 \geq 0$

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

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

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

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

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

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

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

pot #1:

symbol b_2 : $[0, inf)$

symbol a_{21} : $(0, inf)$

symbol b_1 : $[0, inf)$

symbol c_1 : $(-inf, 0)$

symbol a_{11} : $(-inf, 0)$

symbol a_{12} : $(0, inf)$

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

$-c_1 + c_2 \geq 0$

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

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

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

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

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

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

| | | 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 | $\frac{a_{12}b_2 - a_{22}b_1}{a_{12}}$ | $\frac{-a_{11}a_{22} + a_{12}a_{21}}{a_{12}}$ | 0 | $-\frac{a_{22}}{a_{12}}$ | 1 |
| Ψ | $-\frac{b_1c_2}{a_{12}}$ | $\frac{-a_{11}c_2 + a_{12}c_1}{a_{12}}$ | 0 | $-\frac{c_2}{a_{12}}$ | 0 |

Table #1.0.1.0

Moving out basis: x_1 from line: 0

Moving to basis: x_2

pots:

pot #0:

symbol b_2 : $[0, inf)$

symbol a_{21} : $(0, inf)$

symbol b_1 : $[0, inf)$

symbol c_1 : $(-inf, 0)$

symbol a_{11} : $(-inf, 0)$

symbol c_2 : $(0, inf)$

symbol a_{12} : $(0, inf)$

symbol a_{22} : $(-inf, 0)$

$-c_1 + c_2 \geq 0$

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

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

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

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

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

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

| | | | | | |
|--------|-------|----------|----------|-------|-------|
| | | 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 #1.0.1.1

Moving out basis: x_3 from line: 1

Moving to basis: x_2

pots:

pot #0:

symbol b_2 : 0

symbol a_{21} : $(0, inf)$

symbol b_1 : $[0, inf)$

symbol c_1 : $(-inf, 0)$

symbol a_{11} : $(-inf, 0)$

symbol c_2 : $(0, inf)$

symbol a_{12} : $(0, inf)$

symbol a_{22} : $(-inf, 0)$

$-c_1 + c_2 \geq 0$

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

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

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

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

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

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

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

Table #1.0.1.-1

pots:

pot #0:

symbol $b_2 : [0, inf)$

symbol $a_{21} : (0, inf)$

symbol $b_1 : [0, inf)$

symbol $c_1 : (-inf, 0)$

symbol $a_{11} : (0, inf)$

symbol $c_2 : (-inf, 0]$

symbol $a_{12} : (0, inf)$

symbol $a_{22} : (0, inf)$

$-c_1 + c_2 \geq 0$

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

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

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

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

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

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

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

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

Table #1.0.-1

pots:

pot #0:

symbol $b_2 : [0, inf)$

symbol $a_{21} : (0, inf)$

symbol $b_1 : [0, inf)$

symbol $c_1 : (-inf, 0)$

symbol $a_{11} : (0, inf)$

symbol $a_{22} : (0, inf)$

$-c_1 + c_2 \geq 0$

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

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

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

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

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

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

pot #1:

symbol $b_2 : [0, inf)$

symbol $a_{21} : (0, inf)$

symbol $b_1 : [0, inf)$

symbol $c_1 : (-inf, 0)$

symbol $a_{11} : (0, inf)$

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

$-c_1 + c_2 \geq 0$

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

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

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

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

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

pot #2:

symbol $b_2 : [0, inf)$

symbol $a_{21} : (0, inf)$

symbol $b_1 : [0, inf)$

symbol $c_1 : (-inf, 0)$

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

symbol $a_{22} : (0, inf)$

$-c_1 + c_2 \geq 0$

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

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

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

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

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

pot #3:

symbol $b_2 : [0, inf)$

symbol $a_{21} : (0, inf)$

symbol $b_1 : [0, inf)$

symbol $c_1 : (-inf, 0)$

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

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

$-c_1 + c_2 \geq 0$

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

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

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

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

| | | 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 | $\frac{-a_{11}b_2c_2 + a_{12}b_2c_1 + a_{21}b_1c_2 - a_{22}b_1c_1}{a_{11}a_{22} - a_{12}a_{21}}$ | 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:

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

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

$$x_2 = 0$$

$$x_3 = 0$$

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

Table #1.1

Moving out basis: x_0 from line: 1

Moving to basis: x_1

pots:

pot #0:

symbol b_2 : $[0, inf)$

symbol a_{21} : $(0, inf)$

symbol b_1 : $[0, inf)$

symbol c_1 : $(-inf, 0)$

symbol a_{11} : $(0, inf)$

symbol a_{22} : $(0, inf)$

$-c_1 + c_2 \geq 0$

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

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

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

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

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

pot #1:

symbol b_2 : $[0, inf)$

symbol a_{21} : $(0, inf)$

symbol b_1 : $[0, inf)$

symbol c_1 : $(-inf, 0)$

symbol a_{11} : $(0, inf)$

symbol a_{22} : $(0, inf)$

$-c_1 + c_2 \geq 0$

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

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

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

pot #2:

symbol b_2 : $[0, inf)$

symbol a_{21} : $(0, inf)$

symbol b_1 : $[0, inf)$

symbol c_1 : $(-inf, 0)$

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

symbol a_{22} : $(0, inf)$

$-c_1 + c_2 \geq 0$

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

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

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

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

pot #3:

symbol b_2 : $[0, inf)$

symbol a_{21} : $(0, inf)$

symbol b_1 : $[0, inf)$

symbol c_1 : $(-inf, 0)$

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

symbol a_{22} : $(0, inf)$

$-c_1 + c_2 \geq 0$

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

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

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

Solution:

$$x_0 = 0$$

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

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

$$x_3 = 0$$

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

Table #1.-1

pots:

pot #0:

symbol $b_2 : [0, inf)$

symbol $a_{21} : (0, inf)$

symbol $b_1 : [0, inf)$

symbol $c_1 : (-inf, 0)$

symbol $a_{11} : (0, inf)$

$$-c_1 + c_2 \geq 0$$

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

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

pot #1:

symbol $b_2 : [0, inf)$

symbol $a_{21} : (0, inf)$

symbol $b_1 : [0, inf)$

symbol $c_1 : (-inf, 0)$

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

$$-c_1 + c_2 \geq 0$$

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

| | | x_0 | x_1 | x_2 | x_3 |
|--------|---|-------|---|-------|--------------------------|
| x_2 | $-\frac{a_{11}b_2 - a_{21}b_1}{a_{21}}$ | 0 | $-\frac{a_{11}a_{22} - a_{12}a_{21}}{a_{21}}$ | 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 | $-\frac{c_1}{a_{21}}$ |

Solution:

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

$$x_1 = 0$$

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

$$x_3 = 0$$

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

Table #-1

pots:

pot #0:

symbol b_2 : $[0,inf)$

symbol b_1 : $[0,inf)$

symbol c_2 : $[0,inf)$

symbol c_1 : $[0,inf)$

| | | | | | |
|--------|-------|----------|----------|-------|-------|
| | | 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:

$$x_0 = 0$$

$$x_1 = 0$$

$$x_2 = b_1$$

$$x_3 = b_2$$

$$\Psi = 0$$