Ruutjuure leidmine

$$A \Rightarrow 0, a_{-1}\, a_{-2} \ldots a_{-n}$$

$$\sqrt{A} = B = 0, b_{-1}\, b_{-2} \ldots b_{-n}$$

Kui $b_{-1} = 1$, siis

$$A - (0,1)^2 \quad 0$$

$$A - 0,01 \quad 0$$

$$A + 1,11 \quad 0$$

Kui $b_{-2} = 1$, siis

$$A - (0,b_{-1} + + 0,01)^2 \quad 0$$

$$A - ((0,b_{-1})^2 + 2 \cdot 0,b_{-1} \cdot 0,01 + 0,0001) \quad 0$$

$$(A - (0,b_{-1})^2) - 2^{-1}(0,b_{-1} + 2^{-3}) \quad 0$$

$$(A - (0,b_{-1})^2) - 2^{-1}(0,b_{-1}01) \quad 0$$

$$2(A - (0,b_{-1})^2) - 0,b_{-1}01 \quad 0$$

$$2(A - (0,b_{-1})^2) + 1,\overline{b_{-1}}11 \quad 0$$

Kui $b_{-3} = 1$, siis

$$A - (0,b_{-1}b_{-2} + 0,001)^2 \quad 0$$

$$A - (0,b_{-1}b_{-2})^2 - 2 \cdot 0,b_{-1}b_{-2} \cdot 2^{-3} - 2^{-6} \quad 0$$

$$A - (0,b_{-1}b_{-2})^2 - 2^{-2} \cdot (0,b_{-1}b_{-2} + 2^{-4}) \quad 0$$

$$2^2 (A - (0,b_{-1}b_{-2})^2) - (0,b_{-1}b_{-2} + 2^{-4}) \quad 0$$

$$2^2 (A - (0,b_{-1}b_{-2})^2) + (1, \overline{b_{-1}}\,\overline{b_{-2}}11) \quad 0$$

jne.

N: A = 0,1001

A - 0,01 ⩾ 0

+ 00,1001
11,1100
00,0101

b_{-1} = 1

b_{-1}
↓
A - $(0,11)^2$ ⩾ 0

00,1010 ← 1
11,0110
00,0000

b_{-2} = 1

b_{-1} b_{-2}
↓ ↓
A - $(0,1\ 1\ 1)^2$ ⩾0

00,0000 ← 1
11,0011
11,0011

b_{-3} = 0

b_{-1} b_{-2} b_{-3}
↓ ↓ ↙
A - $(0,1\ 1\ 0\ 1)^2$ ⩾ 0

00,0000(0)
11,0011(1)
11,0011 1

$$\sqrt{\frac{9}{16}} = \frac{3}{4}$$

b_{-4} = 0

N: A = 0,10111

Leida $\sqrt{A}$

00,10111
11,11000
00,01111 **$b_{-1} = 1$**

00,11110
11,01100
00,01010 **$b_{-2} = 1$**

00,10100
11,00110
11,11010 **$b_{-3} = 0$**

01,01000
11,00111
00,01111 **$b_{-4} = 1$**