```
P {
   while (y > 1)
      x = x - y
      y = y - x
}

mit
```

$\sigma(x) = 4,\ \sigma(y) = 2$
$< P, \sigma > \rightarrow \sigma'$
$\sigma'(x) = 2,\ \sigma'(y) = 0$

$\sigma_1 = update(\sigma, x, 2)$
$\sigma_2 = update(\sigma_1, y, 0)$

$$3.7\frac{2.5\frac{1.1\overline{<y,\sigma> \rightarrow 2} \mid 1.1\overline{<1,\sigma> \rightarrow 1}}{<(y>1),\sigma> \rightarrow \mathbf{W}} \mid 3.3\frac{3.2\frac{1.2\frac{1.1\overline{<x,\sigma> \rightarrow 4} \mid 1.1\overline{<y,\sigma> \rightarrow 2}}{<x-y,\sigma> \rightarrow 2}}{<x=x-y,\sigma> \rightarrow \sigma_1} \mid 3.2\frac{1.2\frac{1.1\overline{<x,\sigma_1> \rightarrow 2} \mid 1.1\overline{<y,\sigma_1> \rightarrow 2}}{<y-x,\sigma_1> \rightarrow 0}}{<y=y-x,\sigma_1> \rightarrow \sigma_2}}{<x=x-y;\ y=y-x,\sigma> \rightarrow \sigma_2} \mid 3.6\frac{2.5\frac{1.1\overline{<y,\sigma_2> \rightarrow 0} \mid 1.1\overline{<1,\sigma_2> \rightarrow 1}}{<(y>1),\sigma_2> \rightarrow \mathbf{F}}}{<while\ (y>1)\ do\ x=x-y;\ y=y-x,\sigma_2> \rightarrow \sigma'}}{< while\ (y\ >\ 1)\ do\ x\ =\ x\ -\ y;\ y\ =\ y\ -\ x,\ \sigma > \rightarrow\ \sigma'}$$