

Berekenbaarheid 2005, Uitwerking toets 4

1. a)

$$\text{sqrt}(x) = \mu y. \text{eq}(x, y^2)$$

b)

$$\text{sqrt}'(x) = \mu y \leq x. \text{lt}(x, (y + 1)^2)$$

2. a)

$$\text{next_pt}(x) = \mu p. \text{gt}(p, x) \cdot \text{prime}(p) \cdot \text{prime}(p + 2)$$

b)

$$\begin{aligned} \text{pt}(0) &= 3 \\ \text{pt}(y + 1) &= \text{next_pt}(\text{pt}(y)) \end{aligned}$$

3.

$$\text{cdr}(x) = \prod_{i=1}^{\text{gdln}(x) - 1} \text{pn}(i - 1)^{\text{dec}(i, x) + 1}$$