

ID_C0

b c

axm1falseb $\in \mathbb{N}$ axm2falsec $\in \mathbb{N}_1$

MACHINEID_M0

ID_M0

ID_C0

a k

inv1falsea $\in \mathbb{N}$ inv2falsek $\in \mathbb{N}$ inv3falseb = $a * c + k$

kProve termination – we need $c > 0$ (just $c : \backslash \text{nat}$ won't work)

false false act1a, k := 0, btrue

Progress $\hat{=}$

falseconvergent false grd1falsek \geq ctrue true

act1a, k := $a + 1, k - c$ true

Finish $\hat{=}$

falseordinary false grd1falsek $<$ ctrue true