

t1\_nat\_4

(TMYVcoNBPzq4Y6Uq4Cytxc87E84bdJ8doWs)

October 27, 2020

Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k11\_binop\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (\forall X2. \\ & (v1\_xreal\_0 X2) \Rightarrow (\forall X3.(v1\_xreal\_0 X3) \Rightarrow (((r1\_xxreal\_0 \\ & k6\_numbers X0) \wedge ((r1\_xxreal\_0 X0 X1) \wedge ((r1\_xxreal\_0 k6\_numbers \\ & X2) \wedge (r1\_xxreal\_0 X2 X3)))) \Rightarrow (r1\_xxreal\_0 (k3\_xcmplx\_0 X0 X2) ( \\ & k3\_xcmplx\_0 X1 X3)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0 X0) \wedge (v1\_xreal\_0 X1)) \Rightarrow (k11\_binop\_2 X0 X1 = k3\_xcmplx\_0 X0 X1) \quad (2)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (\neg(r1\_xxreal\_0 \\ & k6\_numbers X0) \wedge ((\neg r1\_xxreal\_0 (k11\_binop\_2 X0 X0) (k11\_binop\_2 \\ & X1 X1)) \wedge (r1\_xxreal\_0 X0 X1)))) \end{aligned}$$