

## t100\_xxreal\_3

(TMbrHeCBFFLXnp3zyEa6S3rEE5oAs9VuCK3)

October 27, 2020

Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $k4\_xxreal\_3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_xxreal\_3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_xxreal\_3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_xxreal\_3 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (\forall X2. \\ & (v1\_xxreal\_0 X2) \Rightarrow ((v1\_xxreal\_0 X0) \Rightarrow (k4\_xxreal\_3 X0 (k1\_xxreal\_3 \\ & X1 X2) = k1\_xxreal\_3 (k4\_xxreal\_3 X0 X1) (k4\_xxreal\_3 X0 X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (k2\_xxreal\_3 \\ & (k4\_xxreal\_3 X0 X1) = k4\_xxreal\_3 (k2\_xxreal\_3 X0) X1)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1\_xxreal\_0 X0) \wedge (v1\_xxreal\_0 X1)) \Rightarrow ( \\ & v1\_xxreal\_0 (k4\_xxreal\_3 X0 X1)) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0 X0) \Rightarrow (v1\_xxreal\_0 (k2\_xxreal\_3 X0)) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (k3\_xxreal\_3 \\ & X0 X1 = k1\_xxreal\_3 X0 (k2\_xxreal\_3 X1))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1\_xxreal\_0 X0) \wedge (v1\_xxreal\_0 X1)) \Rightarrow ( \\ & k4\_xxreal\_3 X0 X1 = k4\_xxreal\_3 X1 X0) \end{aligned} \quad (6)$$

### Theorem 1

$$\begin{aligned} & \forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (\forall X2. \\ & (v1\_xxreal\_0 X2) \Rightarrow ((v1\_xxreal\_0 X0) \Rightarrow (k4\_xxreal\_3 X0 (k3\_xxreal\_3 \\ & X1 X2) = k3\_xxreal\_3 (k4\_xxreal\_3 X0 X1) (k4\_xxreal\_3 X0 X2)))))) \end{aligned}$$