

# t10\_xreal\_1

(TMauA6FDsWaurjJip7VjgKUWkqSMZmaokBf)

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Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k4\_xcmplx\_0 : \iota \Rightarrow \iota$  be given. Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1\_xcmplx\_0 X0) \wedge (v1\_xcmplx\_0 X1)) \Rightarrow ( \\ & k6\_xcmplx\_0 (k4\_xcmplx\_0 X0) (k4\_xcmplx\_0 X1) = k6\_xcmplx\_0 X1 \\ & X0) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow ((r1\_xxreal\_0 \\ & (k4\_xcmplx\_0 X0) (k4\_xcmplx\_0 X1)) \Rightarrow (r1\_xxreal\_0 X1 X0))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow ((r1\_xxreal\_0 \\ & X0 X1) \Rightarrow (r1\_xxreal\_0 (k4\_xcmplx\_0 X1) (k4\_xcmplx\_0 X0)))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xreal\_0 X0) \Rightarrow ((v1\_xcmplx\_0 (k4\_xcmplx\_0 X0)) \wedge \\ & (v1\_xreal\_0 (k4\_xcmplx\_0 X0))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (v1\_xcmplx\_0 X0) \quad (6)$$

## Theorem 1

$$\begin{aligned} & \forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (\forall X2. \\ & (v1\_xreal\_0 X2) \Rightarrow ((r1\_xxreal\_0 X0 X1) \Leftrightarrow (r1\_xxreal\_0 (k6\_xcmplx\_0 \\ & X2 X1) (k6\_xcmplx\_0 X2 X0)))))) \end{aligned}$$