

t120_xreal_1 (TM-
FgTvGshaNEVm5VvZmeSiein9Q8UxQKKGU)

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 $k7_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_xcmplx_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. ((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (k3_xcmplx_0 X0 (k5_xcmplx_0 X1) = k7_xcmplx_0 X0 X1) \quad (1)$$

Assume the following.

$$\forall X0. (v1_xreal_0 X0) \Rightarrow (\forall X1. (v1_xreal_0 X1) \Rightarrow (\forall X2. (v1_xreal_0 X2) \Rightarrow (((r1_xxreal_0 X0 X1) \wedge (r1_xxreal_0 X2 k6_numbers)) \Rightarrow (r1_xxreal_0 (k3_xcmplx_0 X1 X2) (k3_xcmplx_0 X0 X2)))))) \quad (2)$$

Assume the following.

$$\forall X0. (v1_xreal_0 X0) \Rightarrow (\forall X1. (v1_xreal_0 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \Rightarrow ((r1_xxreal_0 X0 k6_numbers) \vee (r1_xxreal_0 (k5_xcmplx_0 X1) (k5_xcmplx_0 X0)))))) \quad (3)$$

Assume the following.

$$\forall X0. (v1_xreal_0 X0) \Rightarrow ((v1_xcmplx_0 (k5_xcmplx_0 X0)) \wedge (v1_xreal_0 (k5_xcmplx_0 X0))) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (k3_xcmplx_0 X0 X1 = k3_xcmplx_0 X1 X0) \quad (5)$$

Assume the following.

$$\forall X0. (v1_xreal_0 X0) \Rightarrow (v1_xcmplx_0 X0) \quad (6)$$

Theorem 1

$$\forall X0. (v1_xreal_0 X0) \Rightarrow (\forall X1. (v1_xreal_0 X1) \Rightarrow (\forall X2. (v1_xreal_0 X2) \Rightarrow (((r1_xxreal_0 X0 k6_numbers) \wedge (r1_xxreal_0 X1 X2)) \Rightarrow ((r1_xxreal_0 X1 k6_numbers) \vee (r1_xxreal_0 (k7_xcmplx_0 X0 X1) (k7_xcmplx_0 X0 X2))))))$$