

l19_series_5

(TMSoSL9ihqKvcrFap9WeUqYFEatXYwnJxQq)

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Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k13_complex1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $k7_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (X0 = k2_xcmplx_0 (k6_xcmplx_0 X0 X1) X1)) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1_xcmplx_0 X0) \wedge ((v1_xcmplx_0 X1) \wedge (v1_xcmplx_0 X2))) \Rightarrow (k2_xcmplx_0 (k2_xcmplx_0 X0 X1) X2 = k2_xcmplx_0 X0 (k2_xcmplx_0 X1 X2)) \quad (2)$$

Assume the following.

$$k4_xcmplx_0 (k4_xcmplx_0 np_2) = np_2 \quad (3)$$

Assume the following.

$$k6_xcmplx_0 np_2 np_1 = np_1 \quad (4)$$

Assume the following.

$$k2_xcmplx_0 (k4_xcmplx_0 np_1) (k4_xcmplx_0 np_1) = k4_xcmplx_0 np_2 \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (k13_complex1 X0 X1 = k7_xcmplx_0 X0 X1) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_xreal_0 X0) \wedge (v2_xxreal_0 X0)) \Rightarrow (\forall X1. & \\ (v1_xreal_0 X1) \wedge (v2_xxreal_0 X1)) \Rightarrow (\forall X2.((v1_xreal_0 & \\ X2) \wedge (v2_xxreal_0 X2)) \Rightarrow ((k2_xcmplx_0 (k2_xcmplx_0 X0 X1) X2 = np_1) \Rightarrow & \\ (k6_xcmplx_0 (k13_complex1 np_1 X0) np_1 = k13_complex1 (k2_xcmplx_0 & \\ X1 X2) X0)))) & \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xreal_0 X0) \wedge (v1_xreal_0 X1)) \Rightarrow (v1_xreal_0 (k2_xcmplx_0 X0 X1)) \quad (8)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (v1_xcmplx_0 (k7_xcmplx_0 X0 X1)) \quad (9)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (v1_xcmplx_0 (k6_xcmplx_0 X0 X1)) \quad (10)$$

Assume the following.

$$\forall X0. (v1_xreal_0 X0) \Rightarrow ((v1_xcmplx_0 (k4_xcmplx_0 X0)) \wedge (v1_xreal_0 (k4_xcmplx_0 X0))) \quad (11)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (v1_xcmplx_0 (k2_xcmplx_0 X0 X1)) \quad (12)$$

Assume the following.

$$\forall X0. (v1_xcmplx_0 X0) \Rightarrow (v1_xcmplx_0 (k4_xcmplx_0 X0)) \quad (13)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (k2_xcmplx_0 X0 X1 = k2_xcmplx_0 X1 X0) \quad (14)$$

Assume the following.

$$\forall X0. (v1_xreal_0 X0) \Rightarrow (v1_xcmplx_0 X0) \quad (15)$$

Theorem 1

$$\begin{aligned} \forall X0.((v1_xreal_0 X0) \wedge (v2_xxreal_0 X0)) \Rightarrow (\forall X1. & \\ (v1_xreal_0 X1) \wedge (v2_xxreal_0 X1)) \Rightarrow (\forall X2.((v1_xreal_0 & \\ X2) \wedge (v2_xxreal_0 X2)) \Rightarrow ((k2_xcmplx_0 (k2_xcmplx_0 X0 X1) X2 = np_1) \Rightarrow & \\ (k2_xcmplx_0 np_1 (k13_complex1 np_1 X0) = k2_xcmplx_0 np_2 & \\ (k13_complex1 (k2_xcmplx_0 X1 X2) X0)))) & \end{aligned}$$