

## t14\_series\_5

(TMQ4jr3swh4kQTxX8KMf7c7ZvpvetuEDd7H)

October 27, 2020

Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k13\_complex1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k18\_complex1 : \iota \Rightarrow \iota$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k8\_complex1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k16\_complex1 : \iota \Rightarrow \iota$  be given. Let  $v3\_xxreal\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (r1\_xxreal\_0 \\ & (k13\_complex1 (k18\_complex1 (k2\_xcmplx\_0 X0 X1)) (k7\_real\_1 np\_1 \\ & (k18\_complex1 (k2\_xcmplx\_0 X0 X1)))) (k8\_complex1 (k13\_complex1 \\ & (k18\_complex1 X0) (k7\_real\_1 np\_1 (k18\_complex1 X0))) (k13\_complex1 \\ & (k18\_complex1 X1) (k7\_real\_1 np\_1 (k18\_complex1 X1)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 np\_1) \wedge (m2\_subset\_1 np\_1 k1\_numbers k5\_numbers)) \wedge \\ & ((m1\_subset\_1 np\_1 k5\_numbers) \wedge (m1\_subset\_1 np\_1 k1\_numbers)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((m1\_subset\_1 X0 k1\_numbers) \wedge (v1\_xreal\_0 \\ & X1)) \Rightarrow (k7\_real\_1 X0 X1 = k2\_xcmplx\_0 X0 X1) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (k18\_complex1 X0 = k16\_complex1 X0) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1\_xreal\_0 X0) \wedge (v1\_xreal\_0 X1)) \Rightarrow (v1\_xreal\_0 \\ & (k2\_xcmplx\_0 X0 X1)) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1\_xcmplx\_0 X0) \wedge (v1\_xcmplx\_0 X1)) \Rightarrow ( \\ & v1\_xcmplx\_0 (k2\_xcmplx\_0 X0 X1)) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow ((v1\_xreal\_0 (k16\_complex1 X0)) \wedge (\neg v3\_xxreal\_0 (k16\_complex1 X0))) \quad (7)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (v1\_xcmplx\_0 X0) \quad (8)$$

**Theorem 1**

$$\begin{aligned} \forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (r1\_xxreal\_0 \\ (k13\_complex1 (k18\_complex1 (k2\_xcmplx\_0 X0 X1)) (k2\_xcmplx\_0 \\ np\_1 (k18\_complex1 (k2\_xcmplx\_0 X0 X1)))) (k8\_complex1 (k13\_complex1 \\ (k18\_complex1 X0) (k2\_xcmplx\_0 np\_1 (k18\_complex1 X0))) (k13\_complex1 \\ (k18\_complex1 X1) (k2\_xcmplx\_0 np\_1 (k18\_complex1 X1)))))) \end{aligned}$$