t2_series_2 (TMQBpY3v3GY8kh2ELn7XN7nzuwCady1VQit)

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Let $v1\_xreal\_0 : \iota \Rightarrow o$ be given. Let $k1\_newton : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $np\_\_3 : \iota$ be given. Let $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_2 : \iota$ be given. Let $np\_\_4 : \iota$ be given. Let $np\_\_6 : \iota$ be given. Let $np\_\_5 : \iota$ be given. Let $np\_\_10 : \iota$ be given. Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0) \Rightarrow ((k1\_newton\ (k2\_xcmplx\_0\ X0\ np\_\_1)\ np\_\_4 = k2\_xcmplx\_0\ (k2\_xcmplx\_0\ (k2\_xcmplx\_0\ (k2\_xcmplx\_0\ (k1\_newton\ X0\ np\_\_4)\ (k3\_xcmplx\_0\ np\_\_4\ (k1\_newton\ X0\ np\_\_3)))\ (k3\_xcmplx\_0\ np\_\_6\ (k1\_newton\ X0\ np\_\_2)))\ (k3\_xcmplx\_0\ np\_\_4\ X0))\ np\_\_1) \wedge (k1\_newton\ (k2\_xcmplx\_0\ X0\ np\_\_1)\ np\_\_5 = k2\_xcmplx\_0\ (k2\_xcmplx\_0\ (k2\_xcmplx\_0\ (k2\_xcmplx\_0\ (k1\_newton\ X0\ np\_\_5)\ (k3\_xcmplx\_0\ np\_\_5\ (k1\_newton\ X0\ np\_\_4)))\ (k3\_xcmplx\_0\ np\_\_10\ (k1\_newton\ X0\ np\_\_3)))\ (k3\_xcmplx\_0\ np\_\_10\ (k1\_newton\ X0\ np\_\_2)))\ (k3\_xcmplx\_0\ np\_\_5\ X0))\ np\_\_1)) \tag{1}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0) \Rightarrow (k1\_newton\ (k2\_xcmplx\_0\ X0\ np\_\_1)\ np\_\_3 = k2\_xcmplx\_0\ (k2\_xcmplx\_0\ (k2\_xcmplx\_0\ (k1\_newton\ X0\ np\_\_3)\ (k3\_xcmplx\_0\ np\_\_3\ (k1\_newton\ X0\ np\_\_2)))\ (k3\_xcmplx\_0\ np\_\_3\ X0))\ np\_\_1) \tag{2}$$

Theorem 1

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow((k1\_newton\ (k2\_xcmplx\_0\ X0\ np\_\_1)\ np\_\_3 = k2\_xcmplx\_0\ (k2\_xcmplx\_0\ (k2\_xcmplx\_0\ (k1\_newton\ X0\ np\_\_3)\ (k3\_xcmplx\_0\ np\_\_3\ (k1\_newton\ X0\ np\_\_2)))\ (k3\_xcmplx\_0\ np\_\_3\ X0))\ np\_\_1)\wedge((k1\_newton\ (k2\_xcmplx\_0\ X0\ np\_\_1)\ np\_\_4 = k2\_xcmplx\_0\ (k2\_xcmplx\_0\ (k2\_xcmplx\_0\ (k2\_xcmplx\_0\ (k1\_newton\ X0\ np\_\_4)\ (k3\_xcmplx\_0\ np\_\_4\ (k1\_newton\ X0\ np\_\_3)))\ (k3\_xcmplx\_0\ np\_\_6\ (k1\_newton\ X0\ np\_\_2)))\ (k3\_xcmplx\_0\ np\_\_4\ X0))\ np\_\_1)\wedge(k1\_newton\ (k2\_xcmplx\_0\ X0\ np\_\_1)\ np\_\_5 = k2\_xcmplx\_0\ (k2\_xcmplx\_0\ (k2\_xcmplx\_0\ (k2\_xcmplx\_0\ (k2\_xcmplx\_0\ (k1\_newton\ X0\ np\_\_5)\ (k3\_xcmplx\_0\ np\_\_5\ (k1\_newton\ X0\ np\_\_4)))\ (k3\_xcmplx\_0\ np\_\_10\ (k1\_newton\ X0\ np\_\_3)))\ (k3\_xcmplx\_0\ np\_\_10\ (k1\_newton\ X0\ np\_\_2)))\ (k3\_xcmplx\_0\ np\_\_5\ X0))\ np\_\_1)))$$