t57_prepower (TMN1MUJULh5oD5yP2mfFiafy8SuFB2HYwoH)

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Let $v1\_xreal\_0 : \iota \Rightarrow o$ be given. Let $v1\_rat\_1 : \iota \Rightarrow o$ be given. Let $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6\_numbers : \iota$ be given. Let $k7\_prepower : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $k6\_prepower : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_xcmplx\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_rat\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_rat\_1 : \iota \Rightarrow \iota$ be given. Let $v1\_int\_1 : \iota \Rightarrow o$ be given. Let $k5\_prepower : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_prepower : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xcmplx\_0 : \iota \Rightarrow o$ be given. Let $k7\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_xcmplx\_0 : \iota \Rightarrow \iota$ 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 $k2\_prepower : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0) \Rightarrow (\forall X1.(v1\_rat\_1\ X1) \Rightarrow ((\neg r1\_xxreal\_0\ X0\ k6\_numbers) \Rightarrow (k10\_real\_1\ np\_\_1\ (k6\_prepower\ X0\ X1) = k6\_prepower\ X0\ (k4\_xcmplx\_0\ X1)))) \tag{1}$$

Assume the following.

$$\forall X0.(v1\_rat\_1\ X0) \Rightarrow ((k1\_rat\_1\ (k4\_xcmplx\_0\ X0) = k1\_rat\_1\ X0) \wedge (k2\_rat\_1\ (k4\_xcmplx\_0\ X0) = k4\_xcmplx\_0\ (k2\_rat\_1\ X0))) \tag{2}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0) \Rightarrow (\forall X1.(v1\_int\_1\ X1) \Rightarrow (k5\_prepower\ (k10\_real\_1\ np\_\_1\ X0)\ X1 = k10\_real\_1\ np\_\_1\ (k4\_prepower\ X0\ X1))) \tag{3}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0) \Rightarrow (\forall X1.(v1\_int\_1\ X1) \Rightarrow (k4\_prepower\ X0\ (k4\_xcmplx\_0\ X1) = k10\_real\_1\ np\_\_1\ (k4\_prepower\ X0\ X1))) \tag{4}$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0\ X0) \Rightarrow (k7\_xcmplx\_0\ np\_\_1\ X0 = k5\_xcmplx\_0\ X0) \tag{5}$$

Assume the following.

$$((v2\_xxreal\_0\ np\_\_1)\wedge(m2\_subset\_1\ np\_\_1\ k1\_numbers\ k5\_numbers))\wedge((m1\_subset\_1\ np\_\_1\ k5\_numbers)\wedge(m1\_subset\_1\ np\_\_1\ k1\_numbers)) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k1\_numbers)\wedge(v1\_rat\_1\ X1))\Rightarrow(k7\_prepower\ X0\ X1 = k6\_prepower\ X0\ X1) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k1\_numbers)\wedge(v1\_int\_1\ X1))\Rightarrow(k5\_prepower\ X0\ X1 = k4\_prepower\ X0\ X1) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k1\_numbers)\wedge(v1\_xreal\_0\ X1))\Rightarrow(k10\_real\_1\ X0\ X1 = k7\_xcmplx\_0\ X0\ X1) \tag{9}$$

Assume the following.

$$\forall X0.(v1\_rat\_1\ X0)\Rightarrow((v1\_xcmplx\_0\ (k4\_xcmplx\_0\ X0))\wedge(v1\_rat\_1\ (k4\_xcmplx\_0\ X0))) \tag{10}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow((v1\_xcmplx\_0\ (k5\_xcmplx\_0\ X0))\wedge(v1\_xreal\_0\ (k5\_xcmplx\_0\ X0))) \tag{11}$$

Assume the following.

$$\forall X0.(v1\_rat\_1\ X0)\Rightarrow(v1\_int\_1\ (k2\_rat\_1\ X0)) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k1\_numbers)\wedge(v1\_xreal\_0\ X1))\Rightarrow(m1\_subset\_1\ (k10\_real\_1\ X0\ X1)\ k1\_numbers) \tag{13}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(\forall X1.(v1\_rat\_1\ X1)\Rightarrow(k6\_prepower\ X0\ X1 = k2\_prepower\ (k1\_rat\_1\ X1)\ (k4\_prepower\ X0\ (k2\_rat\_1\ X1)))) \tag{14}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(v1\_xcmplx\_0\ X0) \tag{15}$$

Theorem 1

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(\forall X1.(v1\_rat\_1\ X1)\Rightarrow((\neg r1\_xxreal\_0\ X0\ k6\_numbers)\Rightarrow(k7\_prepower\ (k10\_real\_1\ np\_\_1\ X0)\ X1 = k10\_real\_1\ np\_\_1\ (k6\_prepower\ X0\ X1))))$$