

# t65\_prepower

(TMVsLW33iQhLmRFR7GvPZ7j1qJb7yAe14vi)

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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  $np\_1 : \iota$  be given. Let  $k6\_prepower : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v3\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $k5\_xcmplx\_0 : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k7\_prepower : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k10\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  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  $np\_0 : \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $v6\_membered : \iota \Rightarrow o$  be given. Let  $v1\_int\_1 : \iota \Rightarrow o$  be given. Let  $v5\_membered : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (\neg(\neg r1\_xxreal\_0 X0 X1) \wedge ((\neg v3\_xxreal\_0 X1) \wedge (\neg v2\_xxreal\_0 X0)))) \quad (1)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (\neg(\neg r1\_xxreal\_0 X0 k6\_numbers) \wedge ((\neg r1\_xxreal\_0 X1 X0) \wedge (r1\_xxreal\_0 (k5\_xcmplx\_0 X0) (k5\_xcmplx\_0 X1)))))) \quad (2)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (X0 = k1\_xboole\_0) \quad (3)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_rat\_1 X1) \Rightarrow (\forall X2.(v1\_rat\_1 X2) \Rightarrow (\neg(\neg r1\_xxreal\_0 X0 np\_1) \wedge ((\neg r1\_xxreal\_0 X1 X2) \wedge (r1\_xxreal\_0 (k6\_prepower X0 X1) (k6\_prepower X0 X2)))))) \quad (4)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_rat\_1 X1) \Rightarrow ((\neg r1\_xxreal\_0 X0 k6\_numbers) \Rightarrow (k7\_prepower (k10\_real\_1 np\_1 X0) X1 = k10\_real\_1 np\_1 (k6\_prepower X0 X1)))) \quad (5)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_rat\_1 X1) \Rightarrow ((X1 = k6\_numbers) \Rightarrow (k6\_prepower X0 X1 = np\_1))) \quad (6)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (((r1\_xxreal\_0 X0 X1) \wedge (v2\_xxreal\_0 X0)) \Rightarrow (v2\_xxreal\_0 X1))) \quad (7)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (((r1\_xxreal\_0 k6\_numbers X0) \wedge (r1\_xxreal\_0 X1 X0)) \Rightarrow (r1\_xxreal\_0 (k7\_xcmplx\_0 X1 X0) np\_1))) \quad (8)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (k7\_xcmplx\_0 np\_1 X0 = k5\_xcmplx\_0 X0) \quad (9)$$

Assume the following.

$$((v2\_xxreal\_0 np\_1) \wedge (m2\_subset\_1 np\_1 k1\_numbers k5\_numbers)) \wedge ((m1\_subset\_1 np\_1 k5\_numbers) \wedge (m1\_subset\_1 np\_1 k1\_numbers)) \quad (10)$$

Assume the following.

$$(m2\_subset\_1 np\_0 k1\_numbers k5\_numbers) \wedge ((m1\_subset\_1 np\_0 k5\_numbers) \wedge (m1\_subset\_1 np\_0 k1\_numbers)) \quad (11)$$

Assume the following.

$$v1\_xboole\_0 np\_0 \quad (12)$$

Assume the following.

$$\neg r1\_xxreal\_0 np\_1 np\_0 \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k1\_numbers) \wedge (v1\_rat\_1 X1)) \Rightarrow (k7\_prepower X0 X1 = k6\_prepower X0 X1) \quad (14)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (15)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k1\_numbers) \wedge (v1\_xreal\_0 X1)) \Rightarrow (k10\_real\_1 X0 X1 = k7\_xcmplx\_0 X0 X1) \quad (17)$$

Assume the following.

$$\exists X0.(v1_xboole_0 X0) \wedge ((v1_xcmplx_0 X0) \wedge ((v1_xreal_0 X0) \wedge (v1_xreal_0 X0))) \quad (18)$$

Assume the following.

$$v6\_membered\ k4\_ordinal1 \quad (19)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow ((v1_xcmplx_0 (k5_xcmplx_0 X0)) \wedge (v1_xreal_0 (k5_xcmplx_0 X0))) \quad (20)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0) \wedge (v1\_rat_1 X1)) \Rightarrow (v1_xreal_0 (k6\_prepower\ X0\ X1)) \quad (21)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset_1\ X0\ k1\_numbers) \wedge (v1_xreal_0 X1)) \Rightarrow (m1\_subset_1\ (k10\_real_1\ X0\ X1)\ k1\_numbers) \quad (22)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1\_xxreal_0 X0) \quad (23)$$

Assume the following.

$$\forall X0.((v1\_xxreal_0 X0) \wedge (v2\_xxreal_0 X0)) \Rightarrow ((\neg v1\_xboole_0 X0) \wedge ((v1\_xxreal_0 X0) \wedge (\neg v3\_xxreal_0 X0))) \quad (24)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xcmplx_0 X0) \quad (25)$$

Assume the following.

$$\forall X0.(v1\_int_1 X0) \Rightarrow (v1\_rat_1 X0) \quad (26)$$

Assume the following.

$$\forall X0.(m1\_subset_1\ X0\ k1\_numbers) \Rightarrow (v1_xreal_0 X0) \quad (27)$$

Assume the following.

$$\forall X0.(v6\_membered\ X0) \Rightarrow (v5\_membered\ X0) \quad (28)$$

Assume the following.

$$\forall X0.(v5\_membered\ X0) \Rightarrow (\forall X1.(m1\_subset_1\ X1\ X0) \Rightarrow (v1\_int_1\ X1)) \quad (29)$$

**Theorem 1**

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1\_rat_1 X1) \Rightarrow (\neg(\neg r1\_xxreal_0 X0\ k6\_numbers) \wedge ((\neg r1\_xxreal_0\ np\_1\ X0) \wedge ((\neg r1\_xxreal_0\ X1\ k6\_numbers) \wedge (r1\_xxreal_0\ np\_1\ (k6\_prepower\ X0\ X1)))))))$$