

t99\_prepower  
(TMX7AUFyhU7Apn8mg6aqHp4VpECnLibFKj4)

October 27, 2020

Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $v1\_int\_1 : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k6\_prepower : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_prepower : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k1\_newton : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $v1\_rat\_1 : \iota \Rightarrow o$  be given. Let  $k1\_rat\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_rat\_1 : \iota \Rightarrow \iota$  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  $k4\_ordinal1 : \iota$  be given. Let  $k2\_prepower : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (k1\_newton X0 np\_1 = X0) \quad (1)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_int\_1 X1) \Rightarrow (\neg(\neg r1\_xxreal\_0 X0 k6\_numbers) \wedge (r1\_xxreal\_0 (k4\_prepower X0 X1) k6\_numbers))) \quad (2)$$

Assume the following.

$$\forall X0.(v1\_rat\_1 X0) \Rightarrow ((v1\_int\_1 X0) \Rightarrow ((k1\_rat\_1 X0 = np\_1) \wedge (k2\_rat\_1 X0 = X0))) \quad (3)$$

Assume the following.

$$((v2\_xxreal\_0 np\_1) \wedge (m2\_subset\_1 np\_1 k1\_numbers k5\_numbers)) \wedge ((m1\_subset\_1 np\_1 k5\_numbers) \wedge (m1\_subset\_1 np\_1 k1\_numbers)) \quad (4)$$

Assume the following.

$$r1\_xxreal\_0 np\_1 np\_1 \quad (5)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0 X0) \wedge (v1\_int\_1 X1)) \Rightarrow (v1\_xreal\_0 (k4\_prepower X0 X1)) \quad (7)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_rat\_1 X1) \Rightarrow (k6\_prepower X0 X1 = k2\_prepower (k1\_rat\_1 X1) (k4\_prepower X0 (k2\_rat\_1 X1)))) \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow ((r1\_xxreal\_0 \\ np\_1 X0) \Rightarrow (\forall X2.(v1\_xreal\_0 X2) \Rightarrow (((-r1\_xxreal\_0 X1 k6\_numbers) \Rightarrow \\ ((X2 = k2\_prepower X0 X1) \Leftrightarrow ((k1\_newton X2 X0 = X1) \wedge (-r1\_xxreal\_0 \\ X2 k6\_numbers)))) \wedge ((X1 = k6\_numbers) \Rightarrow ((X2 = k2\_prepower X0 X1) \Leftrightarrow \\ (X2 = k6\_numbers))))))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k4\_ordinal1) \Rightarrow (v7\_ordinal1 X0) \quad (10)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (v1\_xcmplx\_0 X0) \quad (11)$$

Assume the following.

$$\forall X0.(v1\_int\_1 X0) \Rightarrow (v1\_rat\_1 X0) \quad (12)$$

**Theorem 1**

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_int\_1 X1) \Rightarrow ((-r1\_xxreal\_0 X0 k6\_numbers) \Rightarrow (k6\_prepower X0 X1 = k4\_prepower X0 X1)))$$