

## t10\_irrat\_1

(TMdiHUcLfq2omsVX7hK4wRPP9xwXvJrfbmy)

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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  $k1\_seq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_irrat\_1 : \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $k3\_power : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k5\_newton : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_0 : \iota$  be given. Let  $k4\_xcmplx\_0 : \iota \Rightarrow \iota$  be given. Let  $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k6\_newton : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_newton : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (X0 = k1\_xboole\_0) \quad (1)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (k3\_power X0 k6\_numbers = np\_1) \quad (2)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (k5\_newton k6\_numbers X0 = np\_1) \quad (3)$$

Assume the following.

$$v1\_xboole\_0 np\_0 \quad (4)$$

Assume the following.

$$k4\_xcmplx\_0 np\_0 = np\_0 \quad (5)$$

Assume the following.

$$k3\_xcmplx\_0 np\_1 np\_1 = np\_1 \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v1\_xboole\_0 X0) \wedge ((\neg v1\_xboole\_0 X1) \wedge \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)))) \Rightarrow (\forall X2.(m2\_subset\_1 \\ & X2 X0 X1) \Leftrightarrow (m1\_subset\_1 X2 X1)) \end{aligned} \quad (7)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1 X0)\wedge(v7\_ordinal1 X1))\Rightarrow( \quad (9)$$

$$k6\_newton X0 X1 = k4\_newton X0 X1)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1 X0)\wedge(v7\_ordinal1 X1))\Rightarrow( \quad (11)$$

$$k5\_newton X0 X1 = k4\_newton X0 X1)$$

Assume the following.

$$(\neg v1\_xboole\_0 k4\_ordinal1)\wedge(v3\_ordinal1 k4\_ordinal1) \quad (12)$$

Assume the following.

$$\neg v1\_xboole\_0 k1\_numbers \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0 X0)\wedge((\neg v1\_xboole\_0 X1)\wedge \quad (14)$$

$$(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0))))\Rightarrow(\forall X2.(m2\_subset\_1$$

$$X2 X0 X1)\Rightarrow(m1\_subset\_1 X2 X0))$$

Assume the following.

$$m1\_subset\_1 k5\_numbers (k1\_zfmisc\_1 k1\_numbers) \quad (15)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0)\Rightarrow((v1\_funct\_1 (k2\_irrat\_1 X0))\wedge( \quad (16)$$

$$(v1\_funct\_2 (k2\_irrat\_1 X0) k5\_numbers k1\_numbers)\wedge(m1\_subset\_1$$

$$(k2\_irrat\_1 X0) (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers))))))$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0)\Rightarrow(\forall X1.((v1\_funct\_1 X1)\wedge(( \quad (17)$$

$$v1\_funct\_2 X1 k5\_numbers k1\_numbers)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1$$

$$(k2\_zfmisc\_1 k5\_numbers k1\_numbers))))))\Rightarrow((X1 = k2\_irrat\_1 X0)\Leftrightarrow$$

$$(\forall X2.(m2\_subset\_1 X2 k1\_numbers k5\_numbers)\Rightarrow(k1\_seq\_1$$

$$X1 X2 = k3\_xcmplx\_0 (k6\_newton X0 X2) (k3\_power X2 (k4\_xcmplx\_0 X0))))))$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k4\_ordinal1) \Rightarrow (v7\_ordinal1 X0) \quad (18)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (v7\_ordinal1 X0) \quad (19)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (v1\_xreal\_0 X0) \quad (20)$$

**Theorem 1**

$$\forall X0.(m2\_subset\_1 X0 k1\_numbers k5\_numbers) \Rightarrow (k1\_seq\_1 \\ (k2\_irrat\_1 k6\_numbers) X0 = np\_1)$$