

t5\_radix\_3 (TMcsJM-  
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Let  $k6\_numbers : \iota$  be given. Let  $k1\_radix\_3 : \iota \Rightarrow \iota$  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  $np\_1 : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $np\_2 : \iota$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $np\_0 : \iota$  be given. Let  $k6\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_xcmplx\_0 : \iota \Rightarrow \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k7\_nat\_d : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_xreal\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v6\_membered : \iota \Rightarrow o$  be given. Let  $v1\_int\_1 : \iota \Rightarrow o$  be given. Let  $k4\_numbers : \iota$  be given. Let  $k1\_radix\_1 : \iota \Rightarrow \iota$  be given. Let  $v5\_membered : \iota \Rightarrow o$  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.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1\_subset\_1 X0 X1) \quad (3)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 np\_2) \wedge (m2\_subset\_1 np\_2 k1\_numbers k5\_numbers)) \wedge \\ & ((m1\_subset\_1 np\_2 k5\_numbers) \wedge (m1\_subset\_1 np\_2 k1\_numbers)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 np\_1) \wedge (m2\_subset\_1 np\_1 k1\_numbers k5\_numbers)) \wedge \\ & ((m1\_subset\_1 np\_1 k5\_numbers) \wedge (m1\_subset\_1 np\_1 k1\_numbers)) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & (m2\_subset\_1 np\_0 k1\_numbers k5\_numbers) \wedge ((m1\_subset\_1 np\_0 \\ & k5\_numbers) \wedge (m1\_subset\_1 np\_0 k1\_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$v1\_xboole\_0 \text{ } np\_0 \tag{7}$$

Assume the following.

$$k6\_xcmplx\_0 \text{ } np\_1 \text{ } np\_1 = np\_0 \tag{8}$$

Assume the following.

$$k6\_xcmplx\_0 \text{ } np\_0 \text{ } np\_1 = k4\_xcmplx\_0 \text{ } np\_1 \tag{9}$$

Assume the following.

$$r1\_xxreal\_0 (k4\_xcmplx\_0 \text{ } np\_1) \text{ } np\_0 \tag{10}$$

Assume the following.

$$\neg r1\_xxreal\_0 \text{ } np\_0 (k4\_xcmplx\_0 \text{ } np\_1) \tag{11}$$

Assume the following.

$$r1\_xxreal\_0 \text{ } np\_0 \text{ } np\_0 \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1 \text{ } X0)\wedge(v7\_ordinal1 \text{ } X1))\Rightarrow( \tag{13}$$
$$k7\_nat\_d \text{ } X0 \text{ } X1 = k1\_xreal\_0 \text{ } X0 \text{ } X1)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \tag{14}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{15}$$

Assume the following.

$$v6\_membered \text{ } k4\_ordinal1 \tag{16}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 \text{ } X0)\Rightarrow(\forall X1.(v1\_xreal\_0 \text{ } X1)\Rightarrow(((r1\_xxreal\_0 \tag{17}$$
$$k6\_numbers (k6\_xcmplx\_0 \text{ } X0 \text{ } X1))\Rightarrow(k1\_xreal\_0 \text{ } X0 \text{ } X1 = k6\_xcmplx\_0$$
$$X0 \text{ } X1))\wedge((\neg r1\_xxreal\_0 \text{ } k6\_numbers (k6\_xcmplx\_0 \text{ } X0 \text{ } X1))\Rightarrow(k1\_xreal\_0$$
$$X0 \text{ } X1 = k6\_numbers))))$$

Assume the following.

$$\forall X0.(v1\_int\_1 \text{ } X0)\Leftrightarrow(X0 \in k4\_numbers) \tag{18}$$

Assume the following.

$$\begin{aligned} \forall X0.(v7\_ordinal1\ X0) \Rightarrow & (k1\_radix\_3\ X0 = ReplSep\ (toset\ (\lambda X1 : \\ & \iota.m1\_subset\_1\ X1\ k4\_numbers))\ (\lambda X1 : \iota.(r1\_xreal\_0\ (k4\_xcmplx\_0 \\ & (k1\_radix\_1\ (k7\_nat\_d\ X0\ np\_1)))\ X1) \wedge (r1\_xreal\_0\ X1\ (k6\_xcmplx\_0 \\ & (k1\_radix\_1\ (k7\_nat\_d\ X0\ np\_1)))\ np\_1)))\ (\lambda X1 : \iota.X1)) \end{aligned} \quad (19)$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (k1\_radix\_1\ X0 = k3\_power\ np\_2\ X0) \quad (20)$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers) \Rightarrow (v1\_xreal\_0\ X0) \quad (21)$$

Assume the following.

$$\forall X0.(v6\_membered\ X0) \Rightarrow (v5\_membered\ X0) \quad (22)$$

Assume the following.

$$\forall X0.(v6\_membered\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ X0) \Rightarrow (v7\_ordinal1\ X1)) \quad (23)$$

Assume the following.

$$\forall X0.(v5\_membered\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ X0) \Rightarrow (v1\_int\_1\ X1)) \quad (24)$$

**Theorem 1**  $k6\_numbers \in k1\_radix\_3\ k6\_numbers$ .