

## t15\_radix\_2

(TMLPuGT4RfxgG1nbTQdb3NAPTrnsjyFRQ9A)

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Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $np\_1 : \iota$  be given. Let  $r1\_radix\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_radix\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_radix\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_radix\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k10\_radix\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v3\_card\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k3\_radix\_1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.(v7\_ordinal1\ X1) \Rightarrow (( \\ r1\_xxreal\_0\ np\_1\ X1) \Rightarrow (\forall X2.(v7\_ordinal1\ X2) \Rightarrow ((r1\_radix\_1 \\ X1\ X2\ X0) \Rightarrow (X2 = k8\_radix\_1\ X1\ X0\ (k10\_radix\_1\ X0\ X1\ X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.(v7\_ordinal1\ X1) \Rightarrow (\forall X2. \\ (v7\_ordinal1\ X2) \Rightarrow (k5\_radix\_2\ X2\ X1\ X0 = k10\_radix\_1\ X2\ X1\ X0))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.(v7\_ordinal1\ X1) \Rightarrow (\forall X2. \\ ((v3\_card\_1\ X2\ X0) \wedge (m2\_finseq\_1\ X2\ k5\_numbers)) \Rightarrow (\forall X3. \\ ((v3\_card\_1\ X3\ X0) \wedge (m2\_finseq\_1\ X3\ (k3\_radix\_1\ X1))) \Rightarrow ((X2 = X3) \Rightarrow \\ (k3\_radix\_2\ X0\ X1\ X2 = k8\_radix\_1\ X0\ X1\ X3)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((v7\_ordinal1\ X0) \wedge ((v7\_ordinal1 \\ X1) \wedge (v7\_ordinal1\ X2))) \Rightarrow ((v3\_card\_1\ (k5\_radix\_2\ X0\ X1\ X2)\ X1) \wedge \\ (m2\_finseq\_1\ (k5\_radix\_2\ X0\ X1\ X2)\ k5\_numbers)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((v7\_ordinal1\ X0) \wedge ((v7\_ordinal1 \\ X1) \wedge (v7\_ordinal1\ X2))) \Rightarrow ((v3\_card\_1\ (k10\_radix\_1\ X0\ X1\ X2)\ X1) \wedge \\ (m2\_finseq\_1\ (k10\_radix\_1\ X0\ X1\ X2)\ (k3\_radix\_1\ X0))) \end{aligned} \quad (5)$$

**Theorem 1**

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow ((r1\_xxreal\_0\ np\_1\ X0) \Rightarrow (\forall X1. \\ (v7\_ordinal1\ X1) \Rightarrow (\forall X2.(v7\_ordinal1\ X2) \Rightarrow ((r1\_radix\_1 \\ X0\ X1\ X2) \Rightarrow (X1 = k3\_radix\_2\ X0\ X2\ (k5\_radix\_2\ X2\ X0\ X1))))))$$