

t68\_rinfsup1  
(TMHiTU1z9o7kGSHYrovLgQUp6jR11tbtpM3)

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Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v7\_valued\_0 : \iota \Rightarrow o$  be given. Let  $v1\_seq\_2 : \iota \Rightarrow o$  be given. Let  $k2\_rinfsup1 : \iota \Rightarrow \iota$  be given. Let  $k4\_rinfsup1 : \iota \Rightarrow \iota$  be given. Let  $k1\_rinfsup1 : \iota \Rightarrow \iota$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_seq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v3\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k6\_numbers : \iota$  be given. Let  $v2\_seq\_2 : \iota \Rightarrow o$  be given. Let  $k3\_rinfsup1 : \iota \Rightarrow \iota$  be given. Let  $v8\_valued\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(m2\_subset\_1 X0 k1\_numbers k5\_numbers) \Rightarrow (\forall X1. \\ & ((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 k5\_numbers k1\_numbers) \wedge (m1\_subset\_1 \\ & X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))) \Rightarrow ((( \\ & v7\_valued\_0 X1) \wedge (v1\_seq\_2 X1)) \Rightarrow ((k1\_seq\_1 (k4\_rinfsup1 X1) X0 = \\ & k1\_rinfsup1 X1) \wedge (v3\_funct\_1 (k4\_rinfsup1 X1)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_funct\_1 X0) \wedge ((v1\_funct\_2 X0 k5\_numbers k1\_numbers) \wedge \\ & (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))) \Rightarrow \\ & ((v1\_seq\_2 X0) \Rightarrow (k1\_seq\_1 (k4\_rinfsup1 X0) k6\_numbers = k1\_rinfsup1 \\ & X0)) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_funct\_1 X0) \wedge ((v1\_funct\_2 X0 k5\_numbers k1\_numbers) \wedge \\ & (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))) \Rightarrow \\ & ((v2\_seq\_2 X0) \Rightarrow (k1\_seq\_1 (k3\_rinfsup1 X0) k6\_numbers = k2\_rinfsup1 \\ & X0)) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_funct\_1 X0) \wedge ((v1\_funct\_2 X0 k5\_numbers k1\_numbers) \wedge \\ & (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))) \Rightarrow \\ & (((v7\_valued\_0 X0) \Rightarrow (v2\_seq\_2 X0)) \wedge ((v8\_valued\_0 X0) \Rightarrow (v1\_seq\_2 \\ & X0))) \end{aligned} \tag{4}$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \tag{5}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m2\_subset\_1 X0 k1\_numbers k5\_numbers) \Rightarrow (\forall X1. \\ & ((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 k5\_numbers k1\_numbers) \wedge (m1\_subset\_1 \\ & X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))) \Rightarrow ((v7\_valued\_0 \\ & X1) \Rightarrow (k1\_seq\_1 (k3\_rinf sup1 X1) X0 = k1\_seq\_1 X1 X0)) \end{aligned} \tag{6}$$

Assume the following.

$$m2\_subset\_1 k6\_numbers k1\_numbers k5\_numbers \tag{7}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_funct\_1 X0) \wedge ((v1\_funct\_2 X0 k5\_numbers k1\_numbers) \wedge \\ & (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))) \Rightarrow \\ & ((v1\_funct\_1 (k4\_rinf sup1 X0)) \wedge ((v1\_funct\_2 (k4\_rinf sup1 X0) \\ & k5\_numbers k1\_numbers) \wedge (m1\_subset\_1 (k4\_rinf sup1 X0) (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))) \end{aligned} \tag{8}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers \\ & k1\_numbers))) \Rightarrow (((v1\_funct\_1 X0) \wedge (v3\_funct\_1 X0)) \Rightarrow ((v1\_funct\_1 \\ & X0) \wedge ((v7\_valued\_0 X0) \wedge (v8\_valued\_0 X0)))) \end{aligned} \tag{9}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((v1\_funct\_1 X0) \wedge ((v1\_funct\_2 X0 k5\_numbers k1\_numbers) \wedge \\ & (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))) \Rightarrow \\ & (((v7\_valued\_0 X0) \wedge (v1\_seq\_2 X0)) \Rightarrow (k2\_rinf sup1 (k4\_rinf sup1 \\ & X0) = k1\_rinf sup1 X0)) \end{aligned}$$