

## t58\_rinfsup1

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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  $v1\_comseq\_2 : \iota \Rightarrow o$  be given. Let  $v2\_comseq\_2 : \iota \Rightarrow o$  be given. Let  $k4\_rinfsup1 : \iota \Rightarrow \iota$  be given. Let  $k2\_seq\_2 : \iota \Rightarrow \iota$  be given. Let  $k2\_rinfsup1 : \iota \Rightarrow \iota$  be given. Let  $k3\_rinfsup1 : \iota \Rightarrow \iota$  be given. Let  $v1\_seq\_2 : \iota \Rightarrow o$  be given. Let  $v8\_valued\_0 : \iota \Rightarrow o$  be given. Let  $v2\_seq\_2 : \iota \Rightarrow o$  be given. Let  $v3\_membered : \iota \Rightarrow o$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v3\_valued\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0. ((v1\_funct\_1 X0) \wedge ((v1\_funct\_2 X0 k5\_numbers k1\_numbers) \wedge \\ & (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))) \Rightarrow \\ & ((v1\_comseq\_2 X0) \Rightarrow ((v1\_comseq\_2 (k4\_rinfsup1 X0)) \wedge (v1\_comseq\_2 \\ & (k3\_rinfsup1 X0)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1\_funct\_1 X0) \wedge ((v1\_funct\_2 X0 k5\_numbers k1\_numbers) \wedge \\ & (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))) \Rightarrow \\ & ((v1\_seq\_2 X0) \Rightarrow (v8\_valued\_0 (k4\_rinfsup1 X0))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1\_funct\_1 X0) \wedge ((v1\_funct\_2 X0 k5\_numbers k1\_numbers) \wedge \\ & (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))) \Rightarrow \\ & (((v8\_valued\_0 X0) \wedge (v2\_seq\_2 X0)) \Rightarrow (k2\_seq\_2 X0 = k2\_rinfsup1 \\ & X0)) \end{aligned} \tag{3}$$

Assume the following.

$$v3\_membered k1\_numbers \tag{4}$$

Assume the following.

$$\begin{aligned} \forall X0.((v1\_funct\_1 X0) \wedge ((v1\_funct\_2 X0 k5\_numbers k1\_numbers) \wedge \\ (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))) \Rightarrow \\ ((v1\_funct\_1 (k4\_rinf sup1 X0)) \wedge ((v1\_funct\_2 (k4\_rinf sup1 X0) \\ k5\_numbers k1\_numbers) \wedge (m1\_subset\_1 (k4\_rinf sup1 X0) (k1\_zfmisc\_1 \\ (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v3\_valued\_0 X0))) \Rightarrow \\ ((v1\_comseq\_2 X0) \Leftrightarrow ((v1\_seq\_2 X0) \wedge (v2\_seq\_2 X0))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers \\ k1\_numbers))) \Rightarrow (((v1\_funct\_1 X0) \wedge ((v1\_funct\_2 X0 k5\_numbers \\ k1\_numbers) \wedge (v8\_valued\_0 X0) \wedge (v2\_seq\_2 X0)))) \Rightarrow ((v1\_funct\_1 \\ X0) \wedge ((v1\_funct\_2 X0 k5\_numbers k1\_numbers) \wedge (v2\_comseq\_2 X0))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ (k2\_zfmisc\_1 X0 X1))) \Rightarrow (v1\_relat\_1 X2) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1.(v3\_membered X1) \Rightarrow (\forall X2.(m1\_subset\_1 \\ X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow (v3\_valued\_0 X2)) \end{aligned} \quad (9)$$

### Theorem 1

$$\begin{aligned} \forall X0.((v1\_funct\_1 X0) \wedge ((v1\_funct\_2 X0 k5\_numbers k1\_numbers) \wedge \\ (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))) \Rightarrow \\ ((v1\_comseq\_2 X0) \Rightarrow ((v2\_comseq\_2 (k4\_rinf sup1 X0)) \wedge (k2\_seq\_2 \\ (k4\_rinf sup1 X0) = k2\_rinf sup1 (k4\_rinf sup1 X0)))) \end{aligned}$$