

t32\_rinfsup2  
(TMazPQaYPHkSMckteiVAabbiQdkLG2ie68m)

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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  $k7\_numbers : \iota$  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  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_supinf\_1 : \iota$  be given. Let  $k12\_supinf\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v8\_mesfunc5 : \iota \Rightarrow o$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xxreal\_0 : \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k8\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v2\_valued\_0 : \iota \Rightarrow o$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v2\_membered : \iota \Rightarrow o$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $k6\_numbers : \iota$  be given. Assume the following.

$$\forall X0.(v1\_xxreal\_0 X0) \Rightarrow (r1\_xxreal\_0 X0 k1\_xxreal\_0) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (\forall X2. \\ & (v1\_xxreal\_0 X2) \Rightarrow (((r1\_xxreal\_0 X0 X1) \wedge (r1\_xxreal\_0 X1 X2)) \Rightarrow \\ & (r1\_xxreal\_0 X0 X2)))) \end{aligned} \quad (2)$$

Assume the following.

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

Assume the following.

$$m1\_subset\_1 k1\_xboole\_0 k4\_ordinal1 \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v1\_xboole\_0 X0) \wedge ((\neg v1\_xboole\_0 X1) \wedge \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)))) \Rightarrow (\forall X2.(m2\_subset\_1 \\ & X2 X0 X1) \Leftrightarrow (m1\_subset\_1 X2 X1)) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v1\_funct\_1 X1)\wedge((v1\_funct\_2 X1 k5\_numbers X0)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers X0))))))\wedge(v7\_ordinal1 X2))\Rightarrow(k8\_nat\_1 X0 X1 X2 = k1\_funct\_1 X1 X2) \quad (6)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (7)$$

Assume the following.

$$k1\_supinf\_1 = k1\_xxreal\_0 \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge(v2\_valued\_0 X0)))\Rightarrow(k12\_supinf\_2 X0 X1 = k1\_funct\_1 X0 X1) \quad (9)$$

Assume the following.

$$(\neg v1\_xboole\_0 k4\_ordinal1)\wedge(v3\_ordinal1 k4\_ordinal1) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge(v2\_valued\_0 X0)))\Rightarrow(v1\_xxreal\_0 (k1\_funct\_1 X0 X1)) \quad (11)$$

Assume the following.

$$v2\_membered k7\_numbers \quad (12)$$

Assume the following.

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

Assume the following.

$$m1\_subset\_1 k5\_numbers (k1\_zfmisc\_1 k1\_numbers) \quad (14)$$

Assume the following.

$$m1\_subset\_1 k1\_supinf\_1 k7\_numbers \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0.(((v1\_funct\_1 X0)\wedge((v1\_funct\_2 X0 k5\_numbers k7\_numbers)\wedge \\ & (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k7\_numbers))))))\Rightarrow \\ & ((v8\_mesfunc5 X0)\Leftrightarrow(\forall X1.(v1\_xxreal\_0 X1)\Rightarrow(\neg(\neg r1\_xxreal\_0 \\ & X1 k6\_numbers)\wedge(\forall X2.(v7\_ordinal1 X2)\Rightarrow(\exists X3.(v7\_ordinal1 \\ & X3)\wedge((r1\_xxreal\_0 X2 X3)\wedge(\neg r1\_xxreal\_0 X1 (k8\_nat\_1 k7\_numbers \\ & X0 X3)))))))))) \end{aligned} \quad (16)$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Leftrightarrow(X0 \in k4\_ordinal1) \quad (17)$$

Assume the following.

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

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(v1\_xxreal\_0\ X0) \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(v1\_relat\_1\ X2) \quad (20)$$

Assume the following.

$$\forall X0.\forall X1.(v2\_membered\ X1)\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(v2\_valued\_0\ X2)) \quad (21)$$

Assume the following.

$$\forall X0.(v2\_membered\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ X0)\Rightarrow(v1\_xxreal\_0\ X1)) \quad (22)$$

**Theorem 1**

$$\begin{aligned} &\forall X0.((v1\_funct\_1\ X0)\wedge((v1\_funct\_2\ X0\ k5\_numbers\ k7\_numbers)\wedge \\ &(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ k7\_numbers))))))\Rightarrow \\ &((\forall X1.(m2\_subset\_1\ X1\ k1\_numbers\ k5\_numbers)\Rightarrow(r1\_xxreal\_0\ k1\_supinf\_1\ (k12\_supinf\_2\ X0\ X1)))\Rightarrow(v8\_mesfunc5\ X0)) \end{aligned}$$