

# t2\_bagorder (TMdEHaMDiRbwkuXmP- kngrX5R75rsRiRWMkP)

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Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k2\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k9\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  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  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k6\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k1\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_xcmplx\_0 : \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $np\_0 : \iota$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $k1\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_real\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v6\_membered : \iota \Rightarrow o$  be given. Let  $v3\_membered : \iota \Rightarrow o$  be given. Let  $v3\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $v1\_membered : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (X0 = k1\_xboole\_0) \quad (1)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (\neg(r1\_xxreal\_0 X0 X1) \wedge ((\neg v2\_xxreal\_0 X1) \wedge (v2\_xxreal\_0 X0)))) \quad (2)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow ((\neg r1\_xxreal\_0 X1 X0) \Rightarrow (m2\_subset\_1 (k6\_xcmplx\_0 X1 np\_1) k1\_numbers k5\_numbers))) \quad (3)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (k2\_xcmplx\_0 X0 k6\_numbers = X0) \quad (4)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow ((\neg r1\_xxreal\_0 (k1\_nat\_1 X1 np\_1) X0) \Leftrightarrow (r1\_xxreal\_0 X0 X1))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xcmplx\_0 X0)\wedge(v1\_xcmplx\_0 X1))\Rightarrow(k2\_xcmplx\_0 (k4\_xcmplx\_0 X0) (k4\_xcmplx\_0 X1) = k4\_xcmplx\_0 (k2\_xcmplx\_0 X0 X1)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_xcmplx\_0 X0)\wedge((v1\_xcmplx\_0 X1)\wedge(v1\_xcmplx\_0 X2)))\Rightarrow(k2\_xcmplx\_0 (k2\_xcmplx\_0 X0 X1) X2 = k2\_xcmplx\_0 X0 (k2\_xcmplx\_0 X1 X2)) \quad (7)$$

Assume the following.

$$((v2\_xreal\_0 np\_1)\wedge(m2\_subset\_1 np\_1 k1\_numbers k5\_numbers))\wedge((m1\_subset\_1 np\_1 k5\_numbers)\wedge(m1\_subset\_1 np\_1 k1\_numbers)) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xcmplx\_0 X0)\wedge(v1\_xcmplx\_0 X1))\Rightarrow(k2\_xcmplx\_0 X0 (k4\_xcmplx\_0 X1) = k6\_xcmplx\_0 X0 X1) \quad (9)$$

Assume the following.

$$(m2\_subset\_1 np\_0 k1\_numbers k5\_numbers)\wedge((m1\_subset\_1 np\_0 k5\_numbers)\wedge(m1\_subset\_1 np\_0 k1\_numbers)) \quad (10)$$

Assume the following.

$$v1\_xboole\_0 np\_0 \quad (11)$$

Assume the following.

$$k2\_xcmplx\_0 np\_1 (k4\_xcmplx\_0 np\_1) = np\_0 \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0 X0)\wedge((\neg v1\_xboole\_0 X1)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0))))\Rightarrow(\forall X2.(m2\_subset\_1 X2 X0 X1)\Leftrightarrow(m1\_subset\_1 X2 X1)) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k1\_numbers)\wedge(v1\_xreal\_0 X1))\Rightarrow(k9\_real\_1 X0 X1 = k6\_xcmplx\_0 X0 X1) \quad (14)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (15)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (16)$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(k2\_finseq\_1\ X0 = k1\_finseq\_1\ X0) \quad (17)$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(k1\_real\_1\ X0 = k4\_xcmplx\_0\ X0) \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1\ X0)\wedge(m1\_subset\_1\ X1\ k5\_numbers))\Rightarrow \quad (19)$$

$$(k1\_nat\_1\ X0\ X1 = k2\_xcmplx\_0\ X0\ X1)$$

Assume the following.

$$\exists X0.(v1\_xboole\_0\ X0)\wedge((v1\_xcmplx\_0\ X0)\wedge((v1\_xxreal\_0\ X0)\wedge(v1\_xreal\_0\ X0))) \quad (20)$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(k1\_real\_1\ (k1\_real\_1\ X0) = X0) \quad (21)$$

Assume the following.

$$(\neg v1\_xboole\_0\ k4\_ordinal1)\wedge(v3\_ordinal1\ k4\_ordinal1) \quad (22)$$

Assume the following.

$$v6\_membered\ k4\_ordinal1 \quad (23)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow((v1\_xcmplx\_0\ (k4\_xcmplx\_0\ X0))\wedge \quad (24)$$

$$(v1\_xreal\_0\ (k4\_xcmplx\_0\ X0)))$$

Assume the following.

$$v3\_membered\ k1\_numbers \quad (25)$$

Assume the following.

$$\forall X0.\forall X1.(((v2\_xxreal\_0\ X0)\wedge(v1\_xreal\_0\ X0))\wedge \quad (26)$$

$$(\neg v2\_xxreal\_0\ X1)\wedge(v1\_xreal\_0\ X1))\Rightarrow(v3\_xxreal\_0\ (k6\_xcmplx\_0\ X1\ X0))$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge((\neg v1\_xboole\_0\ X1)\wedge \quad (27)$$

$$(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))))\Rightarrow(\forall X2.(m2\_subset\_1\ X2\ X0\ X1)\Rightarrow(m1\_subset\_1\ X2\ X0))$$

Assume the following.

$$m1\_subset\_1\ k5\_numbers\ (k1\_zfmisc\_1\ k1\_numbers) \quad (28)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0\ X0) \Rightarrow (v1\_xcmplx\_0\ (k4\_xcmplx\_0\ X0)) \quad (29)$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers) \Rightarrow (m1\_subset\_1\ (k1\_real\_1\ X0)\ k1\_numbers) \quad (30)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7\_ordinal1\ X0) \Rightarrow (k1\_finseq\_1\ X0 = \text{ReplSep}(\text{toset}(\lambda X1 : \iota.m2\_subset\_1\ X1\ k1\_numbers\ k5\_numbers))(\lambda X1 : \iota. \\ (r1\_xxreal\_0\ np\_1\ X1) \wedge (r1\_xxreal\_0\ X1\ X0))(\lambda X1 : \iota.X1)) \end{aligned} \quad (31)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xcmplx\_0\ X0) \wedge (v1\_xcmplx\_0\ X1)) \Rightarrow (k2\_xcmplx\_0\ X0\ X1 = k2\_xcmplx\_0\ X1\ X0) \quad (32)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0) \Rightarrow (v7\_ordinal1\ X0) \quad (33)$$

Assume the following.

$$\forall X0.(v3\_membered\ X0) \Rightarrow (v1\_membered\ X0) \quad (34)$$

Assume the following.

$$\forall X0.((v1\_xxreal\_0\ X0) \wedge (v2\_xxreal\_0\ X0)) \Rightarrow ((\neg v1\_xboole\_0\ X0) \wedge ((v1\_xxreal\_0\ X0) \wedge (\neg v3\_xxreal\_0\ X0))) \quad (35)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0) \Rightarrow (v1\_xcmplx\_0\ X0) \quad (36)$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k5\_numbers) \Rightarrow (\neg v3\_xxreal\_0\ X0) \quad (37)$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers) \Rightarrow (v1\_xreal\_0\ X0) \quad (38)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0)) \Rightarrow (v1\_xboole\_0\ X1)) \quad (39)$$

Assume the following.

$$\forall X0.(v6\_membered\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ X0) \Rightarrow (v7\_ordinal1\ X1)) \quad (40)$$

Assume the following.

$$\forall X0.(v3\_membered\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ X0) \Rightarrow (v1\_xreal\_0\ X1)) \quad (41)$$

Assume the following.

$$\forall X0.(v1\_membered\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ X0) \Rightarrow (v1\_xcmplx\_0\ X1)) \quad (42)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(m2\_subset\_1\ X0\ k1\_numbers\ k5\_numbers) \Rightarrow (\forall X1. \\ & (m2\_subset\_1\ X1\ k1\_numbers\ k5\_numbers) \Rightarrow ((X1 \in k2\_finseq\_1\ X0) \Leftrightarrow \\ & ((m2\_subset\_1\ (k9\_real\_1\ X1\ np\_1)\ k1\_numbers\ k5\_numbers) \wedge (\neg \\ & r1\_xxreal\_0\ X0\ (k9\_real\_1\ X1\ np\_1)))))) \end{aligned}$$