

### t33\_nat\_3

(TMQ9zYWAsnc2awMzgJ5YdoZ681NdZxFkrEu)

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Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k12\_nat\_3 : \iota \Rightarrow \iota$  be given. Let  $v1\_int\_2 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k10\_newton : \iota$  be given. Let  $v1\_finset\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $v6\_membered : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X2))) \Rightarrow (m1\_subset\_1 X0 X2) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 X1) \Rightarrow ((v1\_xboole\_0 X1) \vee (X0 \in X1)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge (v4\_relat\_1 X1 X0)) \Rightarrow (k1\_relset\_1 X0 X1 = k9\_xtuple\_0 X1) \quad (3)$$

Assume the following.

$$(\neg v1\_xboole\_0 k10\_newton) \wedge (\neg v1\_finset\_1 k10\_newton) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge (v4\_relat\_1 X1 X0)) \Rightarrow (m1\_subset\_1 (k1\_relset\_1 X0 X1) (k1\_zfmisc\_1 X0)) \quad (5)$$

Assume the following.

$$\forall X0. (v7\_ordinal1 X0) \Rightarrow ((v1\_relat\_1 (k12\_nat\_3 X0)) \wedge ((v4\_relat\_1 (k12\_nat\_3 X0) k10\_newton) \wedge ((v1\_funct\_1 (k12\_nat\_3 X0)) \wedge (v1\_partfun1 (k12\_nat\_3 X0) k10\_newton)))) \quad (6)$$

Assume the following.

$$m1\_subset\_1 \ k10\_newton \ (k1\_zfmisc\_1 \ k5\_numbers) \quad (7)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 \ X0 \ (k1\_zfmisc\_1 \ k5\_numbers)) \Rightarrow ((X0 = k10\_newton) \Leftrightarrow (\forall X1.(v7\_ordinal1 \ X1) \Rightarrow ((X1 \in X0) \Leftrightarrow (v1\_int\_2 \ X1)))) \quad (8)$$

Assume the following.

$$\forall X0.(v6\_membered \ X0) \Rightarrow (\forall X1.(m1\_subset\_1 \ X1 \ X0) \Rightarrow (v7\_ordinal1 \ X1)) \quad (9)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 \ X0 \ (k1\_zfmisc\_1 \ k5\_numbers)) \Rightarrow (v6\_membered \ X0) \quad (10)$$

**Theorem 1**

$$\forall X0.(v7\_ordinal1 \ X0) \Rightarrow (\forall X1.(X1 \in k9\_xtuple\_0 \ (k12\_nat\_3 \ X0)) \Rightarrow ((v7\_ordinal1 \ X1) \wedge (v1\_int\_2 \ X1)))$$