

# t6\_nat\_lat (TMdMXdWjhT- bLtWD48wMbC6wfkAXGsdXipPB)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k3\_nat\_lat : \iota$  be given. Let  $k1\_binop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_nat\_lat : \iota$  be given. Let  $v6\_membered : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k6\_nat\_d : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$v6\_membered (u1\_struct\_0 k3\_nat\_lat) \tag{1}$$

Assume the following.

$$(v1\_funct\_1 k1\_nat\_lat) \wedge ((v1\_funct\_2 k1\_nat\_lat (k2\_zfmisc\_1 k5\_numbers k5\_numbers) k5\_numbers) \wedge (m1\_subset\_1 k1\_nat\_lat (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k5\_numbers) k5\_numbers)))) \tag{2}$$

Assume the following.

$$\forall X0. ((v1\_funct\_1 X0) \wedge ((v1\_funct\_2 X0 (k2\_zfmisc\_1 k5\_numbers k5\_numbers) k5\_numbers) \wedge (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k5\_numbers) k5\_numbers) k5\_numbers)))) \Rightarrow ((X0 = k1\_nat\_lat) \Leftrightarrow (\forall X1. (v7\_ordinal1 X1) \Rightarrow (\forall X2. (v7\_ordinal1 X2) \Rightarrow (k1\_binop\_1 X0 X1 X2 = k6\_nat\_d X1 X2)))) \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. ((v7\_ordinal1 X0) \wedge (v7\_ordinal1 X1)) \Rightarrow (k6\_nat\_d X0 X1 = k6\_nat\_d X1 X0) \tag{4}$$

Assume the following.

$$\forall X0. (v6\_membered X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 X0) \Rightarrow (v7\_ordinal1 X1)) \tag{5}$$

## Theorem 1

$$\forall X0. (m1\_subset\_1 X0 (u1\_struct\_0 k3\_nat\_lat)) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 k3\_nat\_lat)) \Rightarrow (k1\_binop\_1 k1\_nat\_lat X0 X1 = k1\_binop\_1 k1\_nat\_lat X1 X0))$$