t5_nat_d (TMLFPgQVrqpoL-GSTTGZ43SoqRmMemuaxfQn)

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Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $r1\_nat\_d : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_int\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1\ X0) \wedge (v7\_ordinal1\ X1)) \Rightarrow ((r1\_nat\_d\ X0\ X1) \Leftrightarrow (r1\_int\_1\ X0\ X1)) \tag{1}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.(v7\_ordinal1\ X1) \Rightarrow (((r1\_int\_1\ X0\ X1) \wedge (r1\_int\_1\ X1\ X0)) \Rightarrow (X0 = X1))) \tag{2}$$

Theorem 1

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.(v7\_ordinal1\ X1) \Rightarrow (((r1\_nat\_d\ X0\ X1) \wedge (r1\_nat\_d\ X1\ X0)) \Rightarrow (X0 = X1)))$$