t32_gr_cy_3 (TMWfN4Wo2SBF3myCV8PoTzQ3sr4PeEanwqZ)

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Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $v1\_int\_2 : \iota \Rightarrow o$ be given. Let $r1\_int\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2\_int\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_nat\_d : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_int\_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.(v7\_ordinal1\ X1) \Rightarrow (\forall X2.\ (v7\_ordinal1\ X2) \Rightarrow ((r1\_nat\_d\ X0\ X1) \Rightarrow (r1\_nat\_d\ X0\ (k3\_xcmplx\_0\ X1\ X2))))) \tag{1}$$

Assume the following.

$$\forall X0.(v1\_int\_1\ X0) \Rightarrow (\forall X1.(v1\_int\_1\ X1) \Rightarrow (\forall X2.\ (v1\_int\_1\ X2) \Rightarrow (((r1\_int\_2\ X0\ X2) \wedge (r2\_int\_1\ X0\ X1\ X2)) \Rightarrow (r1\_int\_2\ X1\ X2)))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1\ X0) \wedge (v7\_ordinal1\ X1)) \Rightarrow (v7\_ordinal1\ (k3\_xcmplx\_0\ X0\ X1)) \tag{3}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.(v7\_ordinal1\ X1) \Rightarrow ((r1\_int\_2\ X0\ X1) \Leftrightarrow (\forall X2.((v7\_ordinal1\ X2) \wedge (v1\_int\_2\ X2)) \Rightarrow (\neg(r1\_nat\_d\ X2\ X0) \wedge (r1\_nat\_d\ X2\ X1))))) \tag{4}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (v1\_int\_1\ X0) \tag{5}$$

Theorem 1

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.(v7\_ordinal1\ X1) \Rightarrow (\forall X2.\ ((v7\_ordinal1\ X2) \wedge (v1\_int\_2\ X2)) \Rightarrow (((r1\_int\_2\ X0\ X2) \wedge (r2\_int\_1\ X0\ (k3\_xcmplx\_0\ X1\ X1)\ X2)) \Rightarrow (r1\_int\_2\ X1\ X2))))$$