t52_orders_1 (TMNBFn989jWxjCopfEJsGs4YvbT4wZiwfJ9)

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Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $r4\_orders\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_relat\_1 : \iota \Rightarrow \iota$ be given. Let $r5\_orders\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1\_relat\_1\ X0) \Rightarrow (\forall X1.(r4\_orders\_1\ X0\ X1) \Leftrightarrow (r5\_orders\_1\ (k2\_relat\_1\ X0)\ X1)) \tag{1}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ X0) \Rightarrow (k2\_relat\_1\ (k2\_relat\_1\ X0) = X0) \tag{2}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ X0) \Rightarrow (v1\_relat\_1\ (k2\_relat\_1\ X0)) \tag{3}$$

Theorem 1

$$\forall X0.(v1\_relat\_1\ X0) \Rightarrow (\forall X1.(r4\_orders\_1\ (k2\_relat\_1\ X0)\ X1) \Leftrightarrow (r5\_orders\_1\ X0\ X1))$$