l42_ndiff_4 (TMTF7UrFggRNSNgQkzejMZ7Pov8FdDXfnE5)

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Let $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_euclid : \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $k1\_pdiff\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_rvsum\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_numbers : \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_seq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_funct\_1 : \iota \Rightarrow \iota$ be given. Let $v3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$(v3\_funct\_2\ (k1\_pdiff\_1\ np\_\_1\ np\_\_1)\ (k1\_euclid\ np\_\_1)\ k1\_numbers) \wedge ((k1\_relset\_1\ (k1\_euclid\ np\_\_1)\ (k1\_pdiff\_1\ np\_\_1\ np\_\_1) = k1\_euclid\ np\_\_1) \wedge ((k1\_rvsum\_1\ (k1\_pdiff\_1\ np\_\_1\ np\_\_1) = k1\_numbers) \wedge (\forall X0.(m1\_subset\_1\ X0\ k1\_numbers) \Rightarrow ((k1\_seq\_1\ (k1\_pdiff\_1\ np\_\_1\ np\_\_1)\ (k12\_finseq\_1\ k1\_numbers\ X0) = X0) \wedge (k1\_funct\_1\ (k2\_funct\_1\ (k1\_pdiff\_1\ np\_\_1\ np\_\_1))\ X0 = k12\_finseq\_1\ k1\_numbers\ X0))))) \tag{1}$$

Theorem 1

$$(k1\_relset\_1\ (k1\_euclid\ np\_\_1)\ (k1\_pdiff\_1\ np\_\_1\ np\_\_1) = k1\_euclid\ np\_\_1) \wedge ((k1\_rvsum\_1\ (k1\_pdiff\_1\ np\_\_1\ np\_\_1) = k1\_numbers) \wedge (\forall X0.(m1\_subset\_1\ X0\ k1\_numbers) \Rightarrow ((k1\_seq\_1\ (k1\_pdiff\_1\ np\_\_1\ np\_\_1)\ (k12\_finseq\_1\ k1\_numbers\ X0) = X0) \wedge (k1\_funct\_1\ (k2\_funct\_1\ (k1\_pdiff\_1\ np\_\_1\ np\_\_1))\ X0 = k12\_finseq\_1\ k1\_numbers\ X0))))$$