t7_taylor_2 (TMKiGEkzkjw5jFU5aKiXGJS1KvJxkr5h2Yr)

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Let $v3\_rcomp\_1 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_numbers : \iota$ be given. Let $k5\_numbers : \iota$ be given. Let $k1\_seq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_seqfunc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_taylor\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k24\_sin\_cos : \iota$ be given. Let $k2\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_fdiff\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2\_fdiff\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2\_funct\_1 : \iota \Rightarrow o$ be given. Let $k2\_subset\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_fdiff\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6\_numbers : \iota$ be given. Let $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_limfunc1 : \iota \Rightarrow \iota$ be given. Let $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((v3\_rcomp\_1\ X0) \wedge (m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ k1\_numbers))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ k5\_numbers) \Rightarrow (k1\_seqfunc\ k1\_numbers\ k1\_numbers\ (k5\_taylor\_1\ k24\_sin\_cos\ X0)\ X1 = k2\_partfun1\ k1\_numbers\ k1\_numbers\ k24\_sin\_cos\ X0)) \tag{1}$$

Assume the following.

$$\forall X0.((v3\_rcomp\_1\ X0) \wedge (m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ k1\_numbers))) \Rightarrow ((k2\_fdiff\_1\ k24\_sin\_cos\ X0 = k2\_partfun1\ k1\_numbers\ k1\_numbers\ k24\_sin\_cos\ X0) \wedge (k9\_xtuple\_0\ (k2\_partfun1\ k1\_numbers\ k1\_numbers\ k24\_sin\_cos\ X0) = X0)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ X1)) \Leftrightarrow (r1\_tarski\ X0\ X1) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((v3\_rcomp\_1\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ k1\_numbers)))\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_numbers\ k1\_numbers))))\Rightarrow(((r2\_fdiff\_1\ X2\ X0)\wedge(r1\_tarski\ X1\ X0))\Rightarrow(r2\_fdiff\_1\ X2\ X1))) \tag{4}$$

Assume the following.

$$(v2\_funct\_1\ k24\_sin\_cos)\wedge((r2\_fdiff\_1\ k24\_sin\_cos\ k1\_numbers)\wedge((r2\_fdiff\_1\ k24\_sin\_cos\ (k2\_subset\_1\ k1\_numbers))\wedge((\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(k1\_fdiff\_1\ k24\_sin\_cos\ X0 = k1\_seq\_1\ k24\_sin\_cos\ X0))\wedge((\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(\neg r1\_xxreal\_0\ (k1\_fdiff\_1\ k24\_sin\_cos\ X0)\ k6\_numbers))\wedge((k1\_relset\_1\ k1\_numbers\ k24\_sin\_cos = k2\_subset\_1\ k1\_numbers)\wedge((k1\_relset\_1\ k1\_numbers\ k24\_sin\_cos = k2\_subset\_1\ k1\_numbers)\wedge(k2\_relset\_1\ k1\_numbers\ k24\_sin\_cos = k3\_limfunc1\ k6\_numbers))))))) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_funct\_1\ X0)\wedge(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_numbers\ k1\_numbers))))\Rightarrow((v1\_funct\_1\ (k2\_fdiff\_1\ X0\ X1))\wedge(m1\_subset\_1\ (k2\_fdiff\_1\ X0\ X1)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_numbers\ k1\_numbers)))) \tag{6}$$

Assume the following.

$$(v1\_funct\_1\ k24\_sin\_cos)\wedge((v1\_funct\_2\ k24\_sin\_cos\ k1\_numbers\ k1\_numbers)\wedge(m1\_subset\_1\ k24\_sin\_cos\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_numbers\ k1\_numbers)))) \tag{7}$$

Assume the following.

$$\forall X0.((v1\_funct\_1\ X0)\wedge(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_numbers\ k1\_numbers))))\Rightarrow(\forall X1.(r2\_fdiff\_1\ X0\ X1)\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_numbers\ k1\_numbers))))\Rightarrow((X2 = k2\_fdiff\_1\ X0\ X1)\Leftrightarrow((k1\_relset\_1\ k1\_numbers\ X2 = X1)\wedge(\forall X3.(m1\_subset\_1\ X3\ k1\_numbers)\Rightarrow((X3 \in X1)\Rightarrow(k1\_seq\_1\ X2\ X3 = k1\_fdiff\_1\ X0\ X3))))))) \tag{8}$$

Theorem 1

$$\forall X0.((v3\_rcomp\_1\ X0)\wedge(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ k1\_numbers)))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ k5\_numbers)\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ k1\_numbers)\Rightarrow((X2 \in X0)\Rightarrow(k1\_seq\_1\ (k1\_seqfunc\ k1\_numbers\ k1\_numbers\ (k5\_taylor\_1\ k24\_sin\_cos\ X0)\ X1)\ X2 = k1\_seq\_1\ k24\_sin\_cos\ X2))))$$