

## t5\_taylor\_2

(TMQ4sRqCV5MvQrjZmqzKTUEgr1gcCvQJEuG)

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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  $k2\_fdiff\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k24\_sin\_cos : \iota$  be given. Let  $k2\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  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  $k1\_seq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  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  $k3\_limfunct1 : \iota \Rightarrow \iota$  be given. Let  $v3\_valued\_0 : \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v3\_membered : \iota \Rightarrow o$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1\_relat\_1 X2) \wedge (v1\_funct\_1 \\ & X2)) \Rightarrow ((X0 \in k9\_xtuple\_0 (k5\_relat\_1 X2 X1)) \Rightarrow (k1\_funct\_1 (k5\_relat\_1 \\ & X2 X1) X0 = k1\_funct\_1 X2 X0)) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 (k1\_zfmisc\_1 X1)) \Leftrightarrow (r1\_tarski X0 X1) \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v3\_rcomp\_1 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ & k1\_numbers))) \Rightarrow (\forall X2. ((v1\_funct\_1 X2) \wedge (m1\_subset\_1 X2 \\ & (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers k1\_numbers)))) \Rightarrow (((r2\_fdiff\_1 \\ & X2 X0) \wedge (r1\_tarski X1 X0)) \Rightarrow (r2\_fdiff\_1 X2 X1))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& (v2\_funct\_1\ k24\_sin\_cos) \wedge ((r2\_fdiff\_1\ k24\_sin\_cos\ k1\_numbers) \wedge \\
& \quad ((r2\_fdiff\_1\ k24\_sin\_cos\ (k2\_subset\_1\ k1\_numbers)) \wedge ((\forall X0. \\
& (m1\_subset\_1\ X0\ k1\_numbers) \Rightarrow (k1\_fdiff\_1\ k24\_sin\_cos\ X0 = k1\_seq\_1 \\
& \quad k24\_sin\_cos\ X0)) \wedge ((\forall X0. (m1\_subset\_1\ X0\ k1\_numbers) \Rightarrow ( \\
& \neg r1\_xxreal\_0\ (k1\_fdiff\_1\ k24\_sin\_cos\ X0)\ k6\_numbers)) \wedge ((k1\_relset\_1 \\
& \quad k1\_numbers\ k24\_sin\_cos = k2\_subset\_1\ k1\_numbers) \wedge ((k1\_relset\_1 \\
& \quad k1\_numbers\ k24\_sin\_cos = k2\_subset\_1\ k1\_numbers) \wedge (k2\_relset\_1 \\
& \quad k1\_numbers\ k24\_sin\_cos = k3\_limfunc1\ k6\_numbers))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. \forall X3. ((v1\_funct\_1\ X2) \wedge \\
& (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))) \Rightarrow (k2\_partfun1 \\
& \quad X0\ X1\ X2\ X3 = k5\_relat\_1\ X2\ X3)
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v3\_valued\_0 \\
& \quad X0))) \Rightarrow (k1\_seq\_1\ X0\ X1 = k1\_funct\_1\ X0\ X1)
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((v1\_relat\_1\ X1) \wedge (v4\_relat\_1\ X1\ X0)) \Rightarrow ( \\
& \quad k1\_relset\_1\ X0\ X1 = k9\_xtuple\_0\ X1)
\end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0. ((v3\_rcomp\_1\ X0) \wedge (m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ k1\_numbers))) \Rightarrow \\
& \quad (\forall X1. ((v1\_funct\_1\ X1) \wedge ((v1\_funct\_2\ X1\ k1\_numbers\ k1\_numbers) \wedge \\
& (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_numbers\ k1\_numbers)))))) \Rightarrow \\
& \quad (k9\_xtuple\_0\ (k2\_partfun1\ k1\_numbers\ k1\_numbers\ X1\ X0) = X0)
\end{aligned} \tag{8}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((v1\_relat\_1\ X0) \wedge (v3\_valued\_0\ X0)) \Rightarrow ( \\
& \quad v1\_relat\_1\ (k5\_relat\_1\ X0\ X1) \wedge (v3\_valued\_0\ (k5\_relat\_1\ X0\ X1)))
\end{aligned} \tag{9}$$

Assume the following.

$$v3\_membered\ k1\_numbers \tag{10}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. \forall X3. ((v1\_funct\_1\ X2) \wedge \\
& (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))) \Rightarrow ((v1\_funct\_1 \\
& (k2\_partfun1\ X0\ X1\ X2\ X3) \wedge (m1\_subset\_1\ (k2\_partfun1\ X0\ X1\ X2\ X3) \\
& \quad (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))
\end{aligned} \tag{11}$$

Assume the following.

$$(v1\_funct\_1 \ k24\_sin\_cos) \wedge ((v1\_funct\_2 \ k24\_sin\_cos \ k1\_numbers \ k1\_numbers) \wedge (m1\_subset\_1 \ k24\_sin\_cos \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ k1\_numbers \ k1\_numbers)))) \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1\_funct\_1 \ X0) \wedge (m1\_subset\_1 \ X0 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ k1\_numbers \ k1\_numbers)))) \Rightarrow (\forall X1. (r2\_fdiff\_1 \ X0 \ X1) \Rightarrow (\forall X2. \\ & ((v1\_funct\_1 \ X2) \wedge (m1\_subset\_1 \ X2 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ k1\_numbers \ k1\_numbers)))) \Rightarrow ((X2 = k2\_fdiff\_1 \ X0 \ X1) \Leftrightarrow ((k1\_rset\_1 \ k1\_numbers \ X2 = X1) \wedge (\forall X3. (m1\_subset\_1 \ X3 \ k1\_numbers) \Rightarrow ((X3 \in X1) \Rightarrow (k1\_seq\_1 \ X2 \ X3 = k1\_fdiff\_1 \ X0 \ X3))))) \quad (13) \end{aligned}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1\_subset\_1 \ X2 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ X0 \ X1))) \Rightarrow ((v4\_relat\_1 \ X2 \ X0) \wedge (v5\_relat\_1 \ X2 \ X1)) \quad (14)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1\_subset\_1 \ X2 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ X0 \ X1))) \Rightarrow (v1\_relat\_1 \ X2) \quad (15)$$

Assume the following.

$$\forall X0. \forall X1. (v3\_membered \ X1) \Rightarrow (\forall X2. (m1\_subset\_1 \ X2 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ X0 \ X1))) \Rightarrow (v3\_valued\_0 \ X2)) \quad (16)$$

### Theorem 1

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