

t31\_integra8  
(TMJ22LQByeSYPqJNyJxvsWnE7C1sqserECd)

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Let  $k2\_fdiff\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_sin\_cos2 : \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k1\_sin\_cos2 : \iota$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $r2\_fdiff\_1 : \iota \Rightarrow \iota \Rightarrow o$  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  $k1\_rerset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_sin\_cos2 : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $v1\_int\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow ((r2\_fdiff\_1 k4\_sin\_cos2 k1\_numbers) \wedge (k1\_fdiff\_1 k4\_sin\_cos2 X0 = k1\_seq\_1 k1\_sin\_cos2 X0)) \quad (1)$$

Assume the following.

$$(k1\_rerset\_1 k1\_numbers k1\_sin\_cos2 = k1\_numbers) \wedge ((k1\_rerset\_1 k1\_numbers k4\_sin\_cos2 = k1\_numbers) \wedge (k1\_rerset\_1 k1\_numbers k7\_sin\_cos2 = k1\_numbers)) \quad (2)$$

Assume the following.

$$\exists X0.(m1\_subset\_1 X0 k1\_numbers) \wedge ((v1\_xxreal\_0 X0) \wedge ((v1\_xcmplx\_0 X0) \wedge ((v1\_xreal\_0 X0) \wedge (v1\_int\_1 X0)))) \quad (3)$$

Assume the following.

$$(v1\_funct\_1 k4\_sin\_cos2) \wedge ((v1\_funct\_2 k4\_sin\_cos2 k1\_numbers k1\_numbers) \wedge (m1\_subset\_1 k4\_sin\_cos2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers k1\_numbers)))) \quad (4)$$

Assume the following.

$$(v1\_funct\_1 k1\_sin\_cos2) \wedge ((v1\_funct\_2 k1\_sin\_cos2 k1\_numbers k1\_numbers) \wedge (m1\_subset\_1 k1\_sin\_cos2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers k1\_numbers)))) \quad (5)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1\_funct\_1 X0) \wedge (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
& \quad k1\_numbers k1\_numbers)))) \Rightarrow (\forall X1.(r2\_diff\_1 X0 X1) \Rightarrow (\forall X2. \\
& ((v1\_funct\_1 X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers \\
& \quad k1\_numbers)))) \Rightarrow ((X2 = k2\_diff\_1 X0 X1) \Leftrightarrow ((k1\_relset\_1 k1\_numbers \\
& \quad X2 = X1) \wedge (\forall X3.(m1\_subset\_1 X3 k1\_numbers) \Rightarrow ((X3 \in X1) \Rightarrow (k1\_seq\_1 \\
& \quad X2 X3 = k1\_diff\_1 X0 X3)))))
\end{aligned} \tag{6}$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (v1\_xreal\_0 X0) \tag{7}$$

**Theorem 1**  $k2\_diff\_1 k4\_sin\_cos2 k1\_numbers = k1\_sin\_cos2$ .