

## t40\_fcont\_1

(TMaw6G9NYruEyhySpSegSqicEEAUJRBZAwd)

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Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_seq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_fcont\_1 : \iota \Rightarrow o$  be given. Let  $r1\_fcont\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_rcomp\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0.((v1\_funct\_1 X0) \wedge (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ k1\_numbers k1\_numbers)))) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow ((r1\_fcont\_1 \\ X0 X1) \Leftrightarrow (\forall X2.(m1\_rcomp\_1 X2 (k1\_seq\_1 X0 X1)) \Rightarrow (\exists X3. \\ (m1\_rcomp\_1 X3 X1) \wedge (\forall X4.(v1\_xreal\_0 X4) \Rightarrow ((X4 \in k1\_relset\_1 \\ k1\_numbers X0) \wedge (X4 \in X3)) \Rightarrow (k1\_seq\_1 X0 X4 \in X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1\_funct\_1 X0) \wedge (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ k1\_numbers k1\_numbers)))) \Rightarrow ((v1\_fcont\_1 X0) \Leftrightarrow (\forall X1.(v1\_xreal\_0 \\ X1) \Rightarrow ((X1 \in k1\_relset\_1 k1\_numbers X0) \Rightarrow (r1\_fcont\_1 X0 X1)))) \end{aligned} \quad (2)$$

### Theorem 1

$$\begin{aligned} \forall X0.((v1\_funct\_1 X0) \wedge (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ k1\_numbers k1\_numbers)))) \Rightarrow ((\forall X1.(v1\_xreal\_0 X1) \Rightarrow ((X1 \in \\ k1\_relset\_1 k1\_numbers X0) \Rightarrow (k1\_seq\_1 X0 X1 = X1))) \Rightarrow (v1\_fcont\_1 \\ X0)) \end{aligned}$$