

# t20\_integra7

(TMHB5ME9cyanti8VZWi6tWp2G7XfFixCUVz)

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Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. 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  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_rcomp\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_fcont\_1 : \iota \Rightarrow o$  be given. Let  $k2\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_integra7 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_seq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_integra5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_integra5 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_integra5 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_comseq\_2 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
& \forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (\forall X2. \\
& \forall X3.((v1\_funct\_1 X3) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
& k1\_numbers k1\_numbers)))) \Rightarrow (((r1\_xxreal\_0 X0 X1) \wedge ((r1\_tarski \\
& (k1\_rcomp\_1 X0 X1) X2) \wedge ((r1\_tarski X2 (k1\_relset\_1 k1\_numbers \\
& X3)) \wedge (v1\_fcont\_1 (k2\_partfun1 k1\_numbers k1\_numbers X3 X2)))))) \Rightarrow \\
& ((v1\_fcont\_1 (k2\_partfun1 k1\_numbers k1\_numbers X3 (k3\_integra5 \\
& X0 X1))) \wedge ((r1\_integra5 (k3\_integra5 X0 X1) X3) \wedge (v1\_comseq\_2 ( \\
& k2\_partfun1 k1\_numbers k1\_numbers X3 (k3\_integra5 X0 X1))))))))) \tag{1}
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (\forall X2. \\
& \forall X3.((v1\_funct\_1 X3) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
& k1\_numbers k1\_numbers)))) \Rightarrow (\forall X4.((v1\_funct\_1 X4) \wedge (m1\_subset\_1 \\
& X4 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers k1\_numbers)))))) \Rightarrow (((r1\_xxreal\_0 \\
& X0 X1) \wedge ((r1\_tarski (k3\_integra5 X0 X1) X2) \wedge ((r1\_integra7 X2 X3 \\
& X4) \wedge ((r1\_integra5 (k3\_integra5 X0 X1) X4) \wedge (v1\_comseq\_2 (k2\_partfun1 \\
& k1\_numbers k1\_numbers X4 (k3\_integra5 X0 X1)))))) \Rightarrow (k1\_seq\_1 \\
& X3 X1 = k7\_real\_1 (k4\_integra5 X0 X1 X4) (k1\_seq\_1 X3 X0)))))) \tag{2}
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow ((r1\_xxreal\_0 \\
& X0 X1) \Rightarrow (k3\_integra5 X0 X1 = k1\_rcomp\_1 X0 X1))) \tag{3}
\end{aligned}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (\forall X2. \\ & \forall X3.((v1\_funct\_1 X3) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & k1\_numbers k1\_numbers)))) \Rightarrow (\forall X4.((v1\_funct\_1 X4) \wedge (m1\_subset\_1 \\ & X4 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers k1\_numbers)))) \Rightarrow (((r1\_xxreal\_0 \\ & X0 X1) \wedge (r1\_tarski (k1\_rcomp\_1 X0 X1) X2) \wedge (r1\_tarski X2 (k1\_relset\_1 \\ & k1\_numbers X3)) \wedge (v1\_fcont\_1 (k2\_partfun1 k1\_numbers k1\_numbers \\ & X3 X2)) \wedge (r1\_integra7 X2 X4 X3)))) \Rightarrow (k1\_seq\_1 X4 X1 = k7\_real\_1 ( \\ & k4\_integra5 X0 X1 X3) (k1\_seq\_1 X4 X0)))))) \end{aligned}$$