

t18\_integra3  
(TMGt6mXTnPAFV3E7vk93BgXW7vRWBMFKKgL)

October 27, 2020

Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v2\_measure5 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $m1\_integral : \iota \Rightarrow \iota \Rightarrow o$  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  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_comseq\_2 : \iota \Rightarrow o$  be given. Let  $k2\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_seq\_4 : \iota \Rightarrow \iota$  be given. Let  $k1\_rvsum\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_integral : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_seq\_4 : \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(m2\_subset\_1 X0 k1\_numbers k5\_numbers) \Rightarrow (\forall X1. \\ & ((\neg v1\_xboole\_0 X1) \wedge ((v2\_measure5 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ & k1\_numbers)))) \Rightarrow (\forall X2.(m1\_integral X2 X1) \Rightarrow ((X0 \in k4\_finseq\_1 \\ & X2) \Rightarrow (r1\_tarski (k2\_integral X1 X2 X0) X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v1\_xboole\_0 X0) \wedge ((\neg v1\_xboole\_0 X1) \wedge \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)))) \Rightarrow (\forall X2.(m2\_subset\_1 \\ & X2 X0 X1) \Leftrightarrow (m1\_subset\_1 X2 X1)) \end{aligned} \quad (2)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (3)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v1\_xboole\_0 X0) \wedge ((v2\_measure5 X0) \wedge (m1\_subset\_1 \\
& X0 (k1\_zfmisc\_1 k1\_numbers)))) \Rightarrow (\forall X1.((\neg v1\_xboole\_0 X1) \wedge \\
& ((v2\_measure5 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 k1\_numbers)))) \Rightarrow \\
& (\forall X2.((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 X0 k1\_numbers) \wedge \\
& (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 k1\_numbers)))) \Rightarrow \\
& (((v1\_comseq\_2 (k2\_partfun1 X0 k1\_numbers X2 X0)) \wedge (r1\_tarski \\
& X1 X0)) \Rightarrow ((r1\_xxreal\_0 (k5\_seq\_4 (k1\_rvsum\_1 X2)) (k5\_seq\_4 (k1\_rvsum\_1 \\
& (k2\_partfun1 X0 k1\_numbers X2 X1)))) \wedge ((r1\_xxreal\_0 (k5\_seq\_4 \\
& (k1\_rvsum\_1 X2)) (k4\_seq\_4 (k1\_rvsum\_1 (k2\_partfun1 X0 k1\_numbers \\
& X2 X1)))) \wedge ((r1\_xxreal\_0 (k4\_seq\_4 (k1\_rvsum\_1 (k2\_partfun1 X0 \\
& k1\_numbers X2 X1))) (k4\_seq\_4 (k1\_rvsum\_1 X2))) \wedge (r1\_xxreal\_0 \\
& (k5\_seq\_4 (k1\_rvsum\_1 (k2\_partfun1 X0 k1\_numbers X2 X1))) (k4\_seq\_4 \\
& (k1\_rvsum\_1 X2))))))))))
\end{aligned} \tag{4}$$

Assume the following.

$$(\neg v1\_xboole\_0 k4\_ordinal1) \wedge (v3\_ordinal1 k4\_ordinal1) \tag{5}$$

Assume the following.

$$\neg v1\_xboole\_0 k1\_numbers \tag{6}$$

Assume the following.

$$m1\_subset\_1 k5\_numbers (k1\_zfmisc\_1 k1\_numbers) \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (((\neg v1\_xboole\_0 X0) \wedge ((v2\_measure5 \\
& X0) \wedge (m1\_subset\_1 X0 (k1\_zfmisc\_1 k1\_numbers)))) \wedge ((m1\_integral \\
& X1 X0) \wedge (v7\_ordinal1 X2))) \Rightarrow ((\neg v1\_xboole\_0 (k2\_integral X0 X1 X2)) \wedge \\
& ((v2\_measure5 (k2\_integral X0 X1 X2)) \wedge (m1\_subset\_1 (k2\_integral \\
& X0 X1 X2) (k1\_zfmisc\_1 k1\_numbers))))
\end{aligned} \tag{8}$$

Assume the following.

$$\forall X0. (m1\_subset\_1 X0 k4\_ordinal1) \Rightarrow (v7\_ordinal1 X0) \tag{9}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0. (m2\_subset\_1 X0 k1\_numbers k5\_numbers) \Rightarrow (\forall X1. \\
& ((\neg v1\_xboole\_0 X1) \wedge ((v2\_measure5 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\
& k1\_numbers)))) \Rightarrow (\forall X2. (m1\_integral X2 X1) \Rightarrow (\forall X3. \\
& ((v1\_funct\_1 X3) \wedge ((v1\_funct\_2 X3 X1 k1\_numbers) \wedge (m1\_subset\_1 \\
& X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X1 k1\_numbers)))) \Rightarrow ((v1\_comseq\_2 \\
& (k2\_partfun1 X1 k1\_numbers X3 X1)) \wedge (X0 \in k4\_finseq\_1 X2)) \Rightarrow (r1\_xxreal\_0 \\
& (k5\_seq\_4 (k1\_rvsum\_1 (k2\_partfun1 X1 k1\_numbers X3 (k2\_integral \\
& X1 X2 X0)))) (k4\_seq\_4 (k1\_rvsum\_1 X3))))))
\end{aligned}$$