

# l17\_integr15

(TMZ6J3CxcpgnSB6YA9DqirV2hZhFt3KyrAD)

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Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k1\_numbers : \iota$  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  $v2\_comseq\_2 : \iota \Rightarrow o$  be given. Let  $k2\_seq\_2 : \iota \Rightarrow \iota$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_seq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
& \forall X0.((v1\_funct\_1 X0) \wedge ((v1\_funct\_2 X0 k5\_numbers k1\_numbers) \wedge \\
& (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))) \Rightarrow \\
& (\forall X1.((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 k5\_numbers k1\_numbers) \wedge \\
& (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))) \Rightarrow \\
& (\forall X2.((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 k5\_numbers k1\_numbers) \wedge \\
& (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))) \Rightarrow \\
& (((v2\_comseq\_2 X0) \wedge ((v2\_comseq\_2 X1) \wedge ((\forall X3.(m2\_subset\_1 \\
& X3 k1\_numbers k5\_numbers) \Rightarrow ((r1\_xxreal\_0 (k1\_seq\_1 X0 X3) (k1\_seq\_1 \\
& X2 X3)) \wedge (r1\_xxreal\_0 (k1\_seq\_1 X2 X3) (k1\_seq\_1 X1 X3)))))) \wedge (k2\_seq\_2 \\
& X0 = k2\_seq\_2 X1)))) \Rightarrow (k2\_seq\_2 X2 = k2\_seq\_2 X0)))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1\_funct\_1 X0) \wedge ((v1\_funct\_2 X0 k5\_numbers k1\_numbers) \wedge \\
& (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))) \Rightarrow \\
& (\forall X1.((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 k5\_numbers k1\_numbers) \wedge \\
& (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))) \Rightarrow \\
& (\forall X2.((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 k5\_numbers k1\_numbers) \wedge \\
& (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))) \Rightarrow \\
& (((v2\_comseq\_2 X0) \wedge ((v2\_comseq\_2 X1) \wedge ((\forall X3.(m2\_subset\_1 \\
& X3 k1\_numbers k5\_numbers) \Rightarrow ((r1\_xxreal\_0 (k1\_seq\_1 X0 X3) (k1\_seq\_1 \\
& X2 X3)) \wedge (r1\_xxreal\_0 (k1\_seq\_1 X2 X3) (k1\_seq\_1 X1 X3)))))) \wedge (k2\_seq\_2 \\
& X0 = k2\_seq\_2 X1)))) \Rightarrow (v2\_comseq\_2 X2)))
\end{aligned} \tag{2}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((v1\_funct\_1 X0) \wedge ((v1\_funct\_2 X0 k5\_numbers k1\_numbers) \wedge \\ & (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))) \Rightarrow \\ & (\forall X1.((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 k5\_numbers k1\_numbers) \wedge \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))) \Rightarrow \\ & (\forall X2.((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 k5\_numbers k1\_numbers) \wedge \\ & (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))) \Rightarrow \\ & (((v2\_comseq\_2 X0) \wedge (v2\_comseq\_2 X2) \wedge ((k2\_seq\_2 X0 = k2\_seq\_2 \\ & X2) \wedge ((\forall X3.(m2\_subset\_1 X3 k1\_numbers k5\_numbers) \Rightarrow (r1\_xreal\_0 \\ & (k1\_seq\_1 X0 X3) (k1\_seq\_1 X1 X3)))) \wedge (\forall X3.(m2\_subset\_1 X3 \\ & k1\_numbers k5\_numbers) \Rightarrow (r1\_xreal\_0 (k1\_seq\_1 X1 X3) (k1\_seq\_1 \\ & X2 X3)))))) \Rightarrow ((v2\_comseq\_2 X1) \wedge ((k2\_seq\_2 X0 = k2\_seq\_2 X1) \wedge \\ & k2\_seq\_2 X2 = k2\_seq\_2 X1)))))) \end{aligned}$$