

## t20\_series\_1

(TMUuFrqh8rHiaFFEkc87jUa2V7Grm9jztU7)

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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  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_series\_1 : \iota \Rightarrow o$  be given. Let  $k4\_series\_1 : \iota \Rightarrow \iota$  be given. Let  $v2\_comseq\_2 : \iota \Rightarrow o$  be given. Let  $k1\_seq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_seq\_2 : \iota \Rightarrow \iota$  be given. Let  $k3\_series\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v3\_valued\_0 : \iota \Rightarrow o$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v3\_membered : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((v1\_funct\_1 X0) \wedge ((v1\_funct\_2 X0 k5\_numbers k1\_numbers) \wedge \\
 & (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))) \Rightarrow \\
 & (\forall X1.((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 k5\_numbers k1\_numbers) \wedge \\
 & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))) \Rightarrow \\
 & (((\forall X2.(m2\_subset\_1 X2 k1\_numbers k5\_numbers) \Rightarrow (r1\_xxreal\_0 \\
 & k6\_numbers (k3\_funct\_2 k5\_numbers k1\_numbers X0 X2))) \wedge (v1\_series\_1 \\
 & X1)) \Rightarrow ((\forall X2.(m2\_subset\_1 X2 k1\_numbers k5\_numbers) \Rightarrow (\exists X3. \\
 & (m2\_subset\_1 X3 k1\_numbers k5\_numbers) \wedge ((r1\_xxreal\_0 X2 X3) \wedge \\
 & (\neg r1\_xxreal\_0 (k3\_funct\_2 k5\_numbers k1\_numbers X0 X3) (k3\_funct\_2 \\
 & k5\_numbers k1\_numbers X1 X3)))))) \vee (v1\_series\_1 X0))))
 \end{aligned} \tag{1}$$

Assume the following.

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

Assume the following.

$$\begin{aligned}
& \forall X0.((v1\_funct\_1 X0) \wedge ((v1\_funct\_2 X0 k5\_numbers k1\_numbers) \wedge \\
& (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))) \Rightarrow \\
& (\forall X1.((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 k5\_numbers k1\_numbers) \wedge \\
& (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))) \Rightarrow \\
& ((\forall X2.(m2\_subset\_1 X2 k1\_numbers k5\_numbers) \Rightarrow (r1\_xxreal\_0 \\
& (k3\_funct\_2 k5\_numbers k1\_numbers X0 X2) (k3\_funct\_2 k5\_numbers \\
& k1\_numbers X1 X2))) \Rightarrow (\forall X2.(m2\_subset\_1 X2 k1\_numbers k5\_numbers) \Rightarrow \\
& (r1\_xxreal\_0 (k3\_funct\_2 k5\_numbers k1\_numbers (k3\_series\_1 \\
& X0) X2) (k3\_funct\_2 k5\_numbers k1\_numbers (k3\_series\_1 X1) X2))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((\neg v1\_xboole\_0 X0) \wedge ((\neg v1\_xboole\_0 X1) \wedge \\
& (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)))) \Rightarrow (\forall X2.(m2\_subset\_1 \\
& X2 X0 X1) \Leftrightarrow (m1\_subset\_1 X2 X1))
\end{aligned} \tag{4}$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \tag{5}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1\_xboole\_0 X0) \wedge \\
& (((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 X0 X1) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\
& (k2\_zfmisc\_1 X0 X1)))))) \wedge (m1\_subset\_1 X3 X0))) \Rightarrow (k3\_funct\_2 X0 \\
& X1 X2 X3 = k1\_funct\_1 X2 X3)
\end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v3\_valued\_0 \\
& X0))) \Rightarrow (k1\_seq\_1 X0 X1 = k1\_funct\_1 X0 X1)
\end{aligned} \tag{8}$$

Assume the following.

$$(\neg v1\_xboole\_0 k4\_ordinal1) \wedge (v3\_ordinal1 k4\_ordinal1) \tag{9}$$

Assume the following.

$$v3\_membered k1\_numbers \tag{10}$$

Assume the following.

$$\neg v1\_xboole\_0 k1\_numbers \tag{11}$$

Assume the following.

$$m2\_subset\_1 \ k6\_numbers \ k1\_numbers \ k5\_numbers \quad (12)$$

Assume the following.

$$m1\_subset\_1 \ k5\_numbers \ (k1\_zfmisc\_1 \ k1\_numbers) \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1\_funct\_1 \ X0) \wedge ((v1\_funct\_2 \ X0 \ k5\_numbers \ k1\_numbers) \wedge \\ (m1\_subset\_1 \ X0 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ k5\_numbers \ k1\_numbers)))))) \Rightarrow \\ ((v1\_funct\_1 \ (k3\_series\_1 \ X0)) \wedge ((v1\_funct\_2 \ (k3\_series\_1 \ X0) \\ k5\_numbers \ k1\_numbers) \wedge (m1\_subset\_1 \ (k3\_series\_1 \ X0) \ (k1\_zfmisc\_1 \\ (k2\_zfmisc\_1 \ k5\_numbers \ k1\_numbers)))))) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1\_funct\_1 \ X0) \wedge ((v1\_funct\_2 \ X0 \ k5\_numbers \ k1\_numbers) \wedge \\ (m1\_subset\_1 \ X0 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ k5\_numbers \ k1\_numbers)))))) \Rightarrow \\ (k4\_series\_1 \ X0 = k2\_seq\_2 \ (k3\_series\_1 \ X0)) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1\_funct\_1 \ X0) \wedge ((v1\_funct\_2 \ X0 \ k5\_numbers \ k1\_numbers) \wedge \\ (m1\_subset\_1 \ X0 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ k5\_numbers \ k1\_numbers)))))) \Rightarrow \\ ((v1\_series\_1 \ X0) \Leftrightarrow (v2\_comseq\_2 \ (k3\_series\_1 \ X0))) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (m1\_subset\_1 \ X2 \ (k1\_zfmisc\_1 \\ (k2\_zfmisc\_1 \ X0 \ X1))) \Rightarrow (v1\_relat\_1 \ X2) \end{aligned} \quad (17)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (v3\_membered \ X1) \Rightarrow (\forall X2. (m1\_subset\_1 \\ X2 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ X0 \ X1))) \Rightarrow (v3\_valued\_0 \ X2)) \end{aligned} \quad (18)$$

### Theorem 1

$$\begin{aligned} \forall X0.((v1\_funct\_1 \ X0) \wedge ((v1\_funct\_2 \ X0 \ k5\_numbers \ k1\_numbers) \wedge \\ (m1\_subset\_1 \ X0 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ k5\_numbers \ k1\_numbers)))))) \Rightarrow \\ (\forall X1.((v1\_funct\_1 \ X1) \wedge ((v1\_funct\_2 \ X1 \ k5\_numbers \ k1\_numbers) \wedge \\ (m1\_subset\_1 \ X1 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ k5\_numbers \ k1\_numbers)))))) \Rightarrow \\ (((\forall X2. (m2\_subset\_1 \ X2 \ k1\_numbers \ k5\_numbers) \Rightarrow ((r1\_xxreal\_0 \\ k6\_numbers \ (k3\_funct\_2 \ k5\_numbers \ k1\_numbers \ X0 \ X2)) \wedge (r1\_xxreal\_0 \\ (k3\_funct\_2 \ k5\_numbers \ k1\_numbers \ X0 \ X2) \ (k3\_funct\_2 \ k5\_numbers \\ k1\_numbers \ X1 \ X2)))))) \wedge (v1\_series\_1 \ X1)) \Rightarrow ((v1\_series\_1 \ X0) \wedge (r1\_xxreal\_0 \\ (k4\_series\_1 \ X0) \ (k4\_series\_1 \ X1)))) \end{aligned}$$