

SET THEORY

2021-12-20

① POWER SET AXIOM

NICE EXERCISE

IF $\tau \in M^P$ AND $\text{DOM } \tau \subseteq$

$\{\check{m} : m \in \omega\}$

LET $\sigma = \{ \langle \check{m}, p \rangle : (\forall q \in I^P) (\langle \check{m}, q \rangle \in \tau \rightarrow q \perp p) \}$

VERIFY

$$\sigma_G = \omega \setminus \tau_G$$

τ ARBITRARY

\Downarrow $\tau \subseteq \omega$

MAKE $\tau' = \{ \langle \check{m}, p \rangle : p \perp \check{m} \in \tau \}$

- $\tau'_G = \tau_G$

THEN WE CAN MAKE σ FROM τ'

AND GET $\sigma_G = \omega \setminus \tau_G$.

READ

"CHAPTER 4" (WEEK 12)

PAGES 62-66

$M \in N$ MODELS OF ZFC

WE HAVE $a \in M$ AND $\sigma \in N$

WITH $\sigma \subseteq a$

FOR ALL RELATIONS $R \in M$

WITH $\text{DOM } R \subseteq a$

WE HAVE $R[\sigma] \in N$

$\text{OB}(\sigma, M) = \{ R[\sigma] : R \in M \text{ RELATION} \}$
 $\text{DOM } R \subseteq a$

IF $\text{OB}(\sigma, M)$ IS CLOSED UNDER TAKING DIFFERENCES

$(A, B \in \text{OB} \rightarrow A \setminus B \in \text{OB})$

THEN σ IS AN M -GENERIC FILTER ON (a, \subseteq) FOR SOME P.O. ON a .