Tsinghua University

数学作业纸

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T_1 (4). $A_4 = \{\{0,-2\}, \{0,-1\}, \{0,0\}, \{0,1\}, \{1,-2\}, \{1,-1\}, \{1,1\},$
$\{2,-2\}, \{2,-1\}, \{2,0\}, \{2,1\}\}$.

T_2 (4). $A = \{x \mid x>2 \wedge x\in N \wedge (\forall y)((y\geq 2 \wedge y\in N) \rightarrow \neg(x \in N-\{1\}))\}$

T_3. $A=\{1\}$, $B=\{\{1\},\{2\}\}$, $C=\{\{\{1\},\{2\}\},\{3\}\}$

T_4. $A=\{1\}$, $B=\{\{1\},\{2\}\}$, $C=\{\{\{1\},\{2\}\},\{1\}\}$

T_6. (1) 真 由 $B\subseteq C$ 知 $(\forall x)(x\in B \rightarrow x\in C)$.
而 $A\in B$, 故 $A\in C$.

(2) 假. (3) 假 $A=\{\{1\}\}$, $B=\{\{1\},\{2\}\}$, $C=\{\{\{1\},\{2\}\},\{3\}\}$

(4) 假.

7.7

(2) $P = \{\phi, \{\{1, \{2\}\}\}\}$

(3) $P = \{\phi, \{a\}, \{\{b\}\}, \{\phi, \{b\}\}, \{\phi, a\}, \{a, \{b\}\}, \{\phi, a, \{b\}\}, \{\phi\}\}$

(5). $P(P(\phi)) = \{\phi, \{\phi\}\}$

$\therefore$ 原式 $= \{\phi, \{\phi\}\} \times \{\phi, \{\phi\}\}$

$= \{\langle\phi, \phi\rangle, \langle\phi, \{\phi\}\rangle, \langle\{\phi\}, \phi\rangle, \langle\{\phi\}, \{\phi\}\rangle\}$.