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Quiz Five MTH 213 , Fall 2011

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QUESTION 1. Let $H = \{a, b, c\}$ and $B = P(H)$ be the power set of H (Note that P(H) is the set of all subsets of H, also note that $\phi \in B$). We know that $\subseteq$ is a partial order relation on B. In view of this partial order relation on B find :

1) Find $\{a, b\} \bigwedge \{b, c\}$

2) Find $\{a, c\} \bigwedge \{b\}$

3) Find $\{b, c\} \bigvee \{a, c\}$

QUESTION 2. Let $A = \{a, b, c\}$ and T be a binary relation on A such that
$T = \{(a, a), (b, b), (c, c), (a, c), (b, c)\}$. Is T a partial order on A? If yes, then if POSSIBLE find the minimum and the maximum element of A under T.

QUESTION 3. Let $A = \{f, w\}$ and $B = P(A)$. Let T be a binary relation on B such that for every $x, y \in B$, $xTy \Leftrightarrow |x| \leq |y|$.
Is T a partial order on B? If YES, then find $\{f\} \bigvee \{w\}$. IF NOT , then BRIEFLY EXPLAIN.

Is T an equivalence relation on B? If NO, then explain BRIEFLY.

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