

Wednesday, April 25

Name _____ Solutions _____

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6.s081 Spring 2018

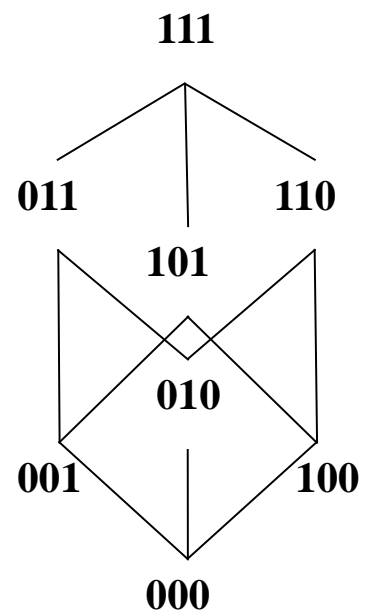
Miniquiz #27

5 Minutes

Let set $P = \{000, 001, 010, 011, 100, 101, 110, 111\}$ and a partial order $x \leq y$ is defined as:

$x \leq y$ if $(x \& y) = x$ where $\&$ is a bitwise and

The figure on the right shows the Hasse diagram of the lattice (P, \leq)



1. What are the top and bottom elements of the lattice?

111 and 000

2. Is this a complete lattice?

Yes

3. What is the least upper bound of the set $\{000, 100, 001\}$?

101

4. What elements does 011 cover?

001 and 010