# C-3.15

Number each bottle from 1 to n. Select $\lceil \log n \rceil$ tasters and map each taster to a bit. On the first day of the month, a taster samples a wine if, in the binary representation of the wine's number, his bit is 1. For example, if taster $A$ is assigned to the lowest order bit and there are 5 bottles, he will sample bottles 1, 3, and 5. If taster $B$ is assigned to the highest order bit, he will sample bottles 4 and 5.

After the month is over, the number of the poisoned bottle can be determined. If a taster dies, then the bit they mapped to is a 1 in the poisoned bottle's number. Otherwise, the bit is a 0.