

## Questions

1. What is the optimal next move in the following game of Nim?

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## Answers

1. Nim piles: 4 (100) 1 (1) 5 (101) 8 (1000) 9 (1001)  
Biggest heap has 4 bits  
Nim sum is not zero, it is 0001.  
Significant bit is 1  
4 1 5 8 9 heap 2 will do. heap 3 will do. heap 5 will do.