

# TIFR CSE 2011 | Part B | Question: 31

asked Oct 22, 2015 • edited May 14, 2018 by Milicevic3306

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Given a set of  $n = 2^k$  distinct numbers, we would like to determine the smallest and the second smallest using comparisons. Which of the following statements is TRUE?

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- A. Both these elements can be determined using  $2k$  comparisons.
- B. Both these elements can be determined using  $n - 2$  comparisons.
- C. Both these elements can be determined using  $n + k - 2$  comparisons.
- D.  $2n - 3$  comparisons are necessary to determine these two elements.
- E.  $nk$  comparisons are necessary to determine these two elements.

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