Question - 1
Binary Search

SCORE: **20 points**

Implement Binary Search, given an array of integers in numerical order.

Question - 2
Performance

SCORE: **5 points**

You have a problem whose execution time is a polynomial function of N, the number of elements in the problem.

That's to say: $t = cN^k$

Which of the following techniques might you consider to reduce the execution time (check all that apply)?

- ◉   lessen the coefficient c (e.g. by running on a faster computer);

- ◉

  Effectively reduce the size of N by dividing the problem into smaller, independent sub-problems (provided that the cost of recombining the solutions doesn't outweigh the benefit).

- ◯   Specifying a different value of the exponent k.