

Divide and conquer

Guess the number

1. You will challenge the computer to guess a number you think of from 1 to 1000.

The computer can only ask the following questions:

Is the number ...?

Is the number smaller than ...?

Write a program that will guess the number using Divide and conquer.

2. You are given a set of natural numbers S . Find the k -th smallest number in the set.
3. You are given 2 natural numbers x and n compute x^n using Divide and conquer