

CATEGORY ARCHIVES: GREEDY

Paper Cut into Minimum Number of Squares

January 10, 2017

Given a paper of size $A \times B$. Task is to cut the paper into squares of any size. Find the minimum number of squares that can be cut from the paper. Examples: Input : 13 x 29 Output : 9 Explanation : 2 (squares of size 13×13) + 4 (squares of size 3×3) +... [Read More »](#)

Geometric Greedy

Minimize the sum of product of two arrays with permutations allowed

December 23, 2016

Given two arrays, A and B, of equal size n, the task is to find the minimum value of $A[0] * B[0] + A[1] * B[1] + \dots + A[n-1] * B[n-1]$. Shuffling of elements of arrays A and B is allowed. Examples: Input : $A[] = \{3, 1, 1\}$ and $B[] = \{6, 5, 4\}$. Output... [Read More »](#)

Arrays Greedy Sorting

Find maximum sum possible equal sum of three stacks

December 21, 2016

Given three stack of the positive numbers, the task is to find the possible equal maximum sum of the stacks with removal of top elements allowed. Stacks are represented as array, and the first index of the array represent the top element of the stack. Examples: Input : $stack1[] = \{3, 10\}$ $stack2[] = \dots$ [Read More »](#)

Greedy Stack

Minimum sum of two numbers formed from digits of an array

December 19, 2016

Given an array of digits (values are from 0 to 9), find the minimum possible sum of two numbers formed from digits of the array. All digits of given array must be used to form the two numbers. Examples: Input: [6, 8, 4, 5, 2, 3] Output: 604 The minimum sum is formed by numbers... [Read More »](#)

Greedy Heap Mathematical number-digits

Maximize array sum after K negations | Set 2

December 11, 2016

Given an array of size n and a number k . We must modify array K number of times. Here modify array means in each operation we can replace any array element $arr[i]$ by $-arr[i]$. We need to perform this operation in such a way that after K operations, sum of array must be maximum? Examples:... [Read More »](#)

Arrays Greedy

Minimum edges to reverse to make path from a source to a destination

November 11, 2016

Given a directed graph and a source node and destination node, we need to find how many edges we need to reverse in order to make at least 1 path from source node to destination node. Examples: In above graph there were two paths from node 0 to node 6, $0 \rightarrow 1 \rightarrow 2 \dots$ [Read More »](#)

Graph Greedy Reverse

Minimum Cost to cut a board into squares

November 8, 2016

A board of length m and width n is given, we need to break this board into $m*n$ squares such that cost of breaking is minimum. cutting cost for each edge will be given for the board. In short we need to choose such a sequence of cutting such that cost is minimized. Examples: For... [Read More »](#)

Greedy

Maximize array sum after K negations | Set 1

October 20, 2016

Given an array of size n and a number k . We must modify array K number of times. Here modify array means in each operation we can replace any array element $arr[i]$ by $-arr[i]$. We need to perform this operation in such a way that after K operations, sum of array must be maximum? Examples:... [Read More »](#)

Arrays Greedy

Job Sequencing Problem | Set 2 (Using Disjoint Set)

June 7, 2016

Given a set of n jobs where each job i has a deadline $d_i \geq 1$ and profit $p_i \geq 0$. Only one job can be scheduled at a time. Each job takes 1 unit of time to complete. We earn the profit if and only if the job is completed by its deadline. The task is to... [Read More »](#)

Greedy

Find smallest number with given number of digits and sum of digits

June 6, 2016

How to find the smallest number with given digit sum s and number of digits d ? Examples : Input : $s = 9, d = 2$ Output : 18 There are many other possible numbers like 45, 54, 90, etc with sum of digits as 9 and number of digits as 2. The smallest of... [Read More »](#)

Greedy number-digits

Minimize the maximum difference between the heights

May 18, 2016

Given heights of n towers and a value k . We need to either increase or decrease height of every tower by k (only once) where $k > 0$. The task is to minimize the difference between the heights of the longest and the shortest tower after modifications, and output this difference. Examples: Input : `arr[]...` [Read More »](#)

Arrays Greedy Adobe-Question

