Sort and Sweep Cheatsheet
(USACO Silver)

Use this algorithm when:

1) There is a logical order to look at the input in
2) When you look at the input in that order, every value only depends on PREVIOUS values

Steps to using the algorithm:

Thinking about the problem:
1) Find a logical order to sort the input in and sort the input
2) Figure out how you want to store information about the previous items
   a. This can be any variable or multiple variables
   b. The two most common ways to store this are:
      ■ An integer
      ■ A set or multiset
3) Figure out how to do steps 6a and 6b

Implementation:
4) Sort the input
5) Initialize variables for the stored information
6) Loop through the input in order. At every index:
   a. Use the current index and the stored information to update your answer
   b. Use the current index to update the stored information

How to calculate the runtime:

O(N log N + N * (runtime of step 6a + runtime of step 6b))