Asteroid Problem

You have a number of asteroids aligned in a line with a space station to the right. All asteroids are travelling at the same speed but they me be travelling either left or right. Asteroids also have an associated mass in addition to their travel direction of left or right. The laws that govern the asteroid collisions are as follows: if two asteroids collide the one with larger mass vaporizes the smaller one and continues travelling in it original direction and at the same speed. You are asked to implement a function that takes a vector of asteroids (aligned left to right) and produces the count of asteroids hits your space station will take. Examples of inputs are displayed next:

(A1:m=10,d=right); (A2:m=11,d=left); (A3:m=11,d=right);(A4:m=5,d=left)=========➔ Space Station

For the example above the result will be 1 hit: A2 destroys A1 and keeps travelling left, A3 destroys A4 and eventually hist the space station

(A1:m=10,d=right); (A2:m=11,d=right); (A3:m=11,d=right)=========➔ Space Station

For the second example, the result is 3 hits as all asteroids travel right one after the other and hit the space station

Write the function to count hits in your favorite language and run a number of test cases through it.

Determine space and time complexity of your solution

```
int countHits( std::vector<Asteroid> a) {




}
```