

Algorithm that checks if a plant is <sup>1</sup>plantable or not

Let  $p$  = number of plants

Let set  $r$  = set of planters

Let set  $s$  = set of plants

mergesort( $r$ )

for  $i$  in  $s$  looping in reverse:

boolean check = false;

for  $j$  in  $r$  looping in reverse: <sup>3</sup>

if check is false and  $j > i$

check is true

$j = i$

if check is false

print("NO")

exit loop.

print("Yes")

This works because we sort the plants & start at the end, then we check if theres a planter with a larger value, if not, we exit the loop & print NO

Runtime estimate:  $O(2 \log n)$