Problem # 414 : Third Maximum Number

<https://leetcode.com/problems/third-maximum-number/>

Solution:

[https://leetcode.com/problems/third-maximum-number/discuss/819701/Simple-Python-3-Solution-O(n-\*-log-n)-runtime](https://leetcode.com/problems/third-maximum-number/discuss/819701/Simple-Python-3-Solution-O(n-*-log-n)-runtime)

##### Simple Python 3 Solution -- O(n \* log n) runtime

1. We need to first check if there are at least 3 distinct numbers in nums array.
2. Convert nums into a set and check if the length is less than 3. If so, return the max value in nums.
3. If the set has at least 3 distinct numbers, then sort the numbers in reverse order (i.e. from highest to lowest). Then get the third largest number (it will have index 2 since it is 0-based indexing).

class Solution:

def thirdMax(self, nums: List[int]) -> int:

if len(set(nums)) < 3:

return(max(nums))

else:

return(sorted(list(set(nums)), reverse = True)[2])