Ex 2.4.14: What is the minimum number of items that must be exchanged during a remove the maximum operation in a heap of size N with no duplicate keys? Give a heap of size 15 for which the minimum is achieved. Answer the same questions for two and three successive remove the maximum operations.

Solution:
We can put numbers in a way that we get 2 as number of m in swaps. Worst case is $logN$ where we would have to check at each level if parent and any of its children have to be swapped. Best case is 2 swaps.