**Approach : n = INT\_MAX in worst case, so can’t apply DP.**

-> Can calculate answer using DP in O(n) upto 10^7, max number is 10^31 - 1, and 10^7 is approx 2^23, so reducing from 2^31 to 2^23 using bfs will have 8 lvls (as if u keep dividing by 2 , u eventually reach anyways reach), and 3^m nodes at every lvl where m = 1,...8, so 3^8 nodes max which around 10^3 and pass the time limit.