

# Review 4-2

1. Guess the solution to the recurrence  $T(n) = T(n/3) + T(2n/3) + cn$ , where  $c$  is a constant, is  $\Theta(n \lg n)$  (both  $O(n \lg n)$  and  $\Omega(n \lg n)$ ) by appealing to a recursion tree.