

Exercise 2.4.2

Kevin Martin
CIS675 - Syracuse University

January 15, 2020

The recurrence relation for binary multiplication using Gauss's trick is $x_L y_R + x_R y_L = (x_L + x_R)(y_L + y_R) - x_L y_R - x_R y_L$ Parameters:
a = 3 (three multiplication operations)
b = 2 (still divided each string N in half)
d = 1 (constant addition)
Case = 3 ($d < \log_2 4$)
Solution = $O((n^{\log_2 4}) = O(n^2))$