2) (10 pts) ANL (Algorithm Analysis)

A program takes O(**nlgm**) time to process **n** data sets, each which have **m** values. For 100,000 data sets, each with 2^{16} values, the program takes 500 ms (milliseconds) to complete. Given this information, how many milliseconds would we expect the program to take to process 60,000 data sets, each with 2^{20} values?