Steven Murr

3.3 REDOS

15) What is the largest n for which one can solve within one second a problem using an algorithm that requires $f(n)$ bit operations, where each bit operation is carried out in 10^{-9} seconds, with these functions $f(n)$?

a) $logn$

2^{10^9}

b) n

10^9

c) $nlogn$

$3.96 \cdot 10^7$

d) n^2

$3.16 \cdot 10^4$

e) 2^n

29

f) $n!$

12