HW#1

Connor Reilly, EOSC-201

assume 30 days

	1 sec 10^6 μs	1 min 6×10^7 μs	1 hr 3.6×10^9 μs	1 day 8.64×10^{10} μs	1 month 2.592×10^{12} μs	1 yr 3.1104×10^{13} μs	1 century 3.1104×10^{15} μs
$\lg n$	$n = 2^{10^6}$	$n = 2^{6\times10^7}$	$n = 2^{3.6\times10^9}$	$n = 2^{8.64\times10^{10}}$	$n = 2^{2.592\times10^{12}}$	$n = 2^{3.1104\times10^{13}}$	$n = 3.1104\times10^{15}$
$\sqrt{n}$	$n = 10^{12}$	$n = 36\times10^{15}$	$n = 1.296\times10^{19}$	$n = 7.46\times10^{21}$	$n = 6.718\times10^{24}$	$n = 9.67\times10^{26}$	$n = 9.67\times10^{30}$
n	$n = 10^6$	$n = 6\times10^7$	$n = 3.6\times10^9$	$n = 8.64\times10^{10}$	$n = 2.592\times10^{12}$	$n = 3.1104\times10^{13}$	$n = 3.1104\times10^{15}$
$n\lg n$	$n = 62746$	$n = 2.8\times10^6$	$n = 1.33\times10^8$	$n = 2.76\times10^9$	$n = 7.19\times10^{10}$	$n = 7.87\times10^{11}$	$n = 6.77\times10^{13}$
n^2	$n = 10^3$	$n = 7745$	$n = 60000$	$n = 293938$	$n = 1.61\times10^6$	$n = 5.58\times10^6$	$n = 5.58\times10^{7}$
n^3	$n = 100$	$n = 391$	$n = 1532$	$n = 4420$	$n = 13736$	$n = 31448$	$n = 145973$
2^n	~~$n=20$~~ $n=19$	$n = 25$	$n = 31$	$n = 36$	$n = 41$	$n = 44$	$n = 51$
$n!$	$n = 9$	$n = 11$	$n = 12$	$n = 13$	$n = 15$	$n = 16$	$n = 17$