Stephen Townsend

CS162 Lab 10

N	Recursion		N	Iteration	
	Clocks	Seconds		Clocks	Seconds
30	66	0.066	100	0	0
35	746	0.746	1000	0	0
40	8517	8.517	10000	0	0
45	96195	96.195	1000000	4	0.004
50	1084839	1084.84	10000000	28	0.028
			100000000	277	0.277
			INT_MAX	6292	6.292

From the table above, as N get larger the more recursion shows its inefficiencies. A coder is better off using an Iteration algorithm. It is a lot faster to loop through an equation then having to recall the function. The reason being, the stack that is being used is too large when it needs to be created N times. Overall the clear winner is an iteration algorithm.