DOCUMENTO DE ANALISIS/ FIGHT-RADAR.

-**Informacion**:...

-**Formula de crecimiento del algoritmo**: T(n,d)=cte*f(n)*g(d).

f(n)=(4.633144E-17)n^4 + O(n^3)
g(d)= 0.683990909778416d + O(1)

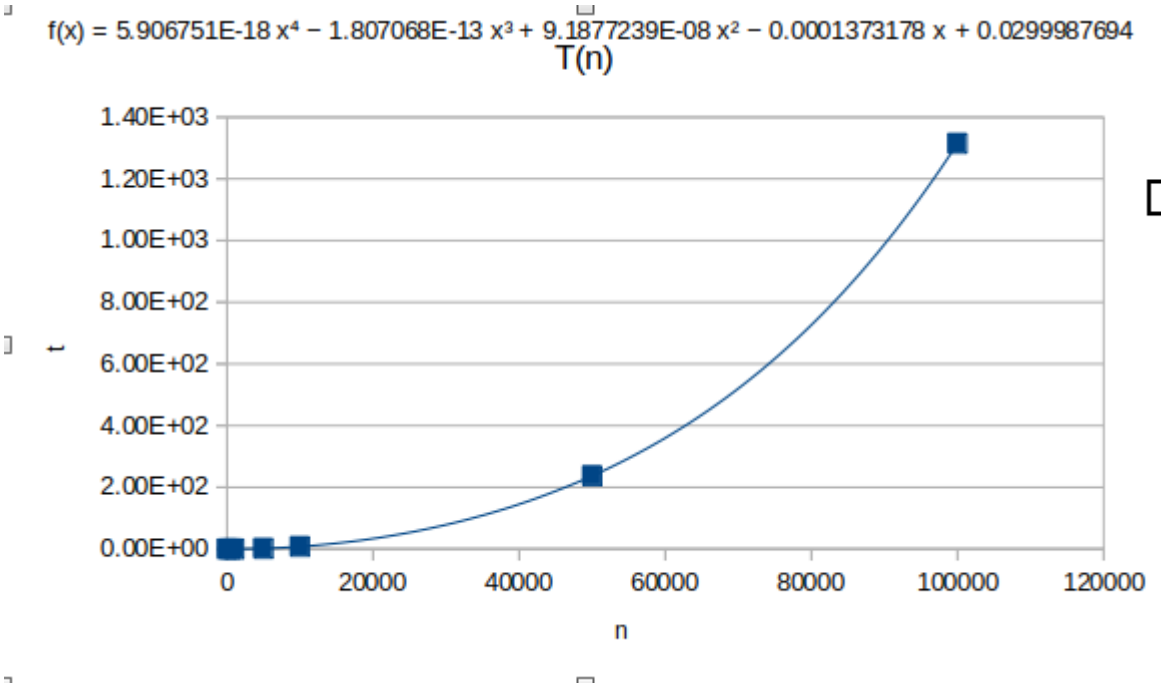
Formula de crecimiento;

T(n,d)= f(n)*g(d)= (3.16903E-17)(d)(n^4) + O(n^3)

-**Tablas de resultados**:

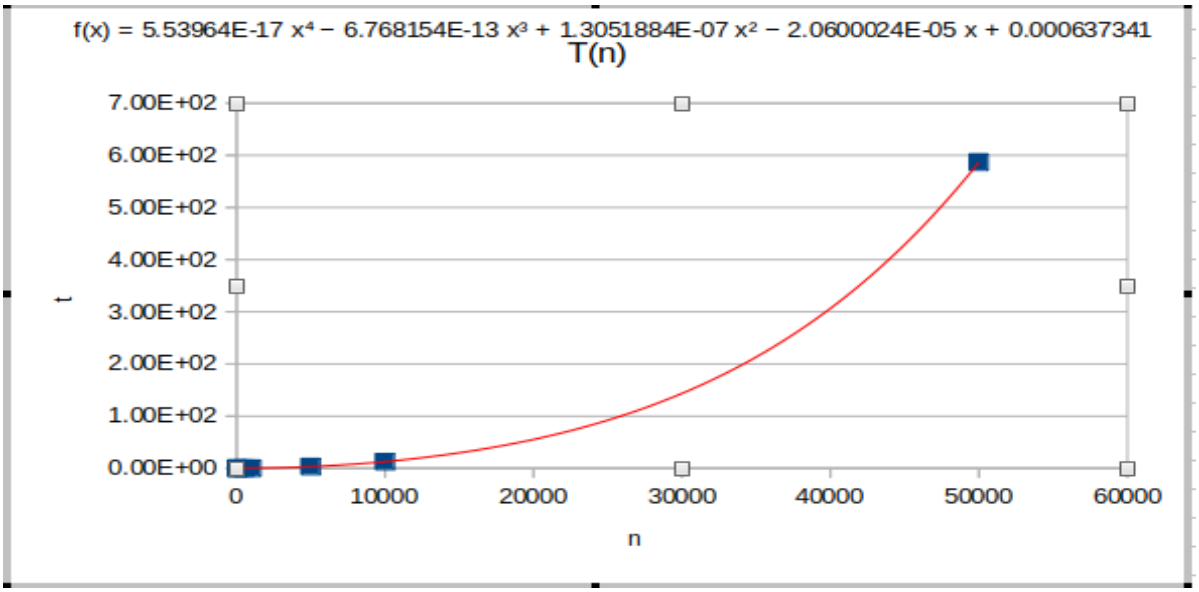
1- Datos para un valor de [densidad] fijado. **D==0.2**

n(variable)	**tiempo**
n=10	4.19E-6s
n=50	1.915E-4s
n=100	5.741E-4s
n=500	0.011882s
n=1000	0.047696s
n=5000	1.591084s
n=10000	7.731655s
n=50000	237.18645s
n=100000	1315.0392s



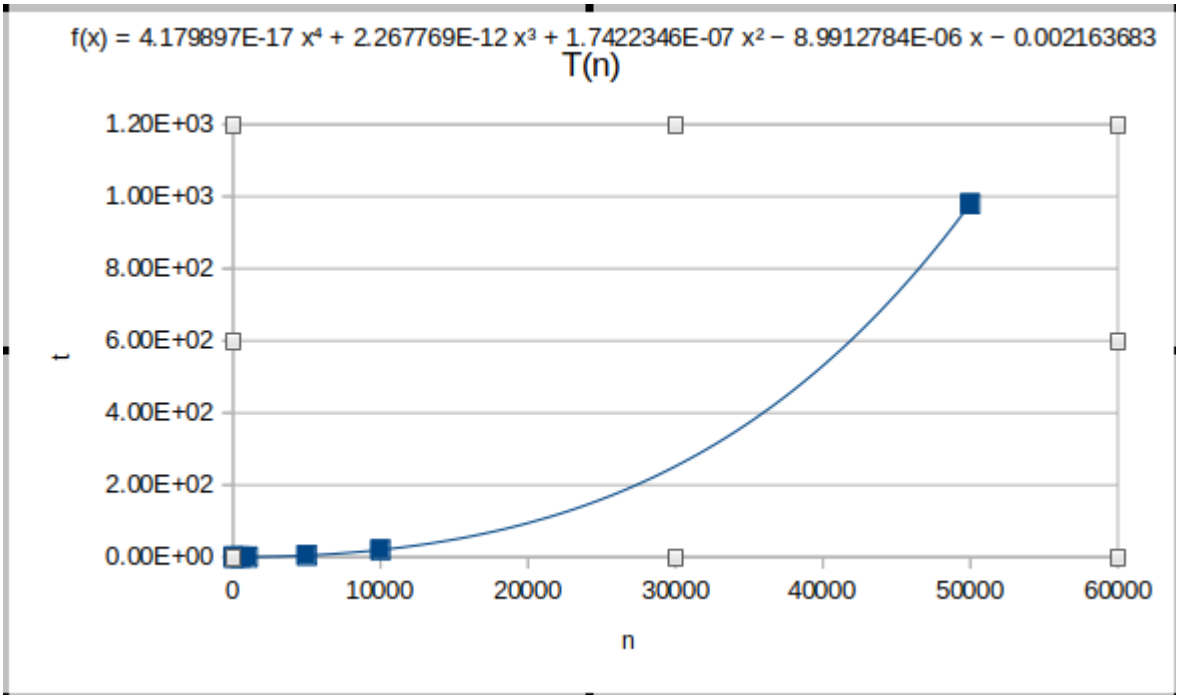
2- Datos para un valor de [densidad] fijado. **D==2.0**

n(variable)	**tiempo**
10	8.281E-6s
50	5.398E-5s
100	4.456E-4s
500	0.022476s
1000	0.110101s
5000	3.110624s
10000	12.72367s
50000	586.8933s
100000	***



3- Datos para un valor de [densidad] fijado. **D==5.0**

n(variable)	**tiempo**
10	2.351E-6s
50	2.087E-4s
100	8.413E-4s
500	0.0222457s
1000	0.173843s
5000	4.617708s
10000	20.01607s
50000	979.8216s
100000	?



-Según los datos de f(n) para (d) fijada.

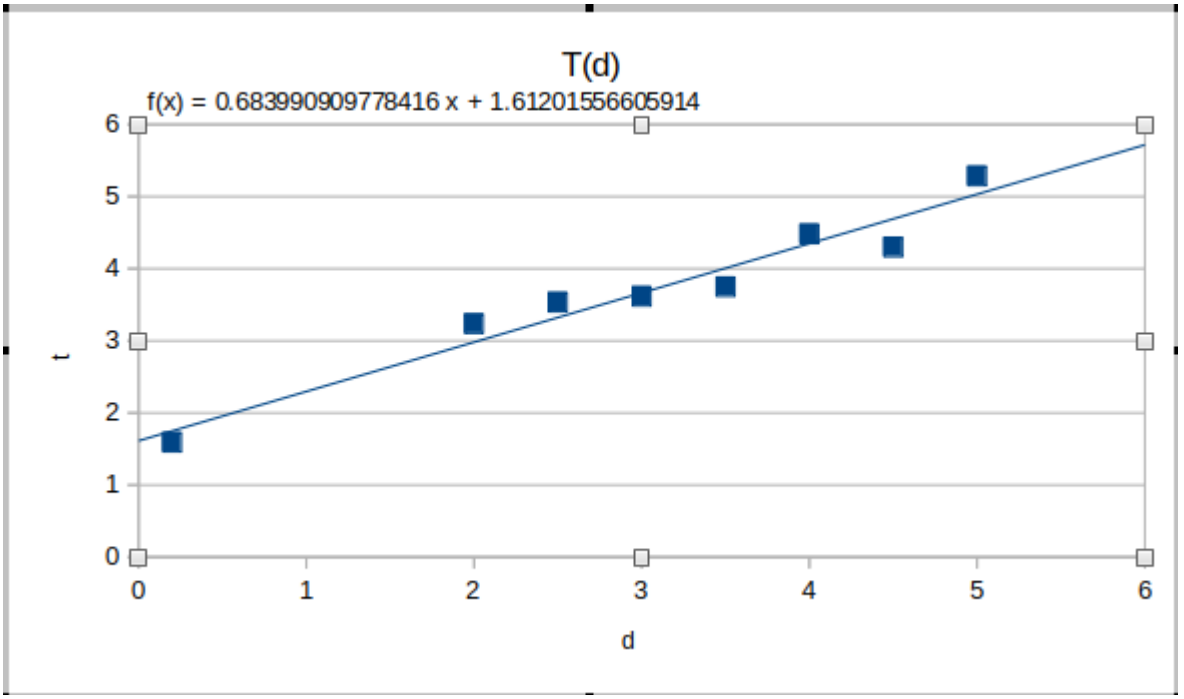
f1(x)= (5,906751E-18)x^4 - (1,807068E-13)x^3 + (9,1877239E-08)x^2 - (0,0001373178)x + (0,0299987694)
f2(x)= (5,53964E-17)x^4 - (6,768154E-13)x^3 + (1,3051884E-07)x^2 - (2,0600024E-05)x + (0,000637341)

f3(x)= (4,179897E-17)x^4 + (2,267769E-12)x^3 + (1,7422346E-07)x^2 - (8.9912784E-07)x -(0,02163683)

f(n)= (f1 + f2 + f3)/3= (4.633144E-17)n^4 + O(n^3)

4- Datos para un valor de [usuarios] fijado. **N==5000**

d(densidad)	**t(tiempo)**
0.2	1.59108s
2	3.23636s
2.5	3.535s
3	3.61577s
3.5	3.74876s
4	4.48131s
4.5	4.29889s
5	5.28353s



f1(x)= 0.683990909778416x + 1.612015566059

Por lo que g(d) estará acotada por:

g(d)= 0.683990909778416d + O(1)