## Recherche de la meilleure valeure pour maxiter:

lci je prend nb\_iter = 1000 (qui est la valeur par défaut), et maxiter =
1000000 (qui est aussi la valeur par défaut).

- Ici j'ai testé beaucoup de codes et à chaque fois le résultat est
- Par contre je trouve des résultats très variés quand il s'agit de GF(2)
- Tous les codes du deuxième tableau je les testé sauf que le résultat est presque toujours 1.

Code	(100 % , 90 % , 80 % )
(GF(2),96,32)	(23 ,1 ,1), (22 ,1 ,1), (1 ,8 ,7), (1 ,9 ,8), (1 ,8 ,6), (30 ,1 ,1), ( 1 ,7 , 10 ), (1 ,7 ,9)
(GF(2),99,33)	(19 ,1 ,1), (25 ,1 ,1), (1 ,8 ,9), (45 ,1 ,1), (1 ,7 ,6), (1 ,7 ,8), (24 ,1 ,1), (1 ,6 ,8), (1 ,6 ,9)
(GF(2),128,32)	(25 ,1 ,1), (25 ,1 ,1), (22 ,1 ,1), (25 ,1 ,1), (28 ,1 ,1), (30 ,1 ,1), (1 ,7 ,7)
(GF(3),60,15)	(1 ,16 ,14), (10 ,1 ,1), (10 ,1 ,1), (1 ,13 ,12), (1 ,18 ,14)
(GF(3),64,16)	(1 ,13 ,14), (1 ,16 ,10), (9 ,1 ,1), (1 ,14 ,16), (1 ,13 ,12), (1 ,16 ,24)
(GF(3),68,17)	(1 ,13 ,13),(1 ,20 ,13),(1 ,12 ,13), (11 ,1 ,1), (1 ,14 ,14), (8 ,1 ,1),(10 ,1 ,1)
(GF(7),36,9)	(1,32,45),(6,1,1),(1,49,50),(1,42,54),(1,38,36),(1,43,42),(1,38,52),
(GF(7),40,10)	(1,40,44),(1,39,41),(1,40,40),(1,53,37),(1,55,34),(1,38,59),
(GF(8),36,9)	(1,57,64),(1,44,53),(1,53,49),(1,45,48),(1,60,59),(5,1,1),(1,62,48),
(GF(8),40,10)	(1 ,68 ,38),(1 ,61 ,50),(5 ,1 ,1),(1 ,54 ,43),(1 ,46 ,50),(1 ,39 ,46)
(GF(9), 32, 8)	(1 ,47 ,64),(1 ,66 ,47),(1 ,50 ,56),(1 ,52 ,72),(1 ,79 ,51),(1 ,48 ,59),(1 ,58 ,66),
(GF(7**2),35,6)	
(GF(2),128,32)	(1 ,6 ,7),(23 ,1 ,1),(1 ,9 ,7),(1 ,6 ,8),(20 ,1 ,1),(27 ,1 ,1),(20 ,1 ,1),
(GF(2), 96, 32)	(22 ,1 ,1),(23 ,1 ,1),(24 ,1 ,1),(1 ,8 ,8),(1 ,6 ,6),(26 ,1 ,1),
(GF(3),96,32)	(1 ,14 ,14),(1 ,16 ,14),(1 ,13 ,18),(1 ,11 ,14),(13 ,1 ,1),(1 ,17 ,14),(11 ,1 ,1),
(GF(5), 96, 32)	(1,31,36),(7,1,1),(6,1,1),(1,24,33),(1,31,23),(1,26,29),(1

	,32 ,35),
(GF(5), 44, 11)	
(GF(2),111,11)	
(GF(3),99,33)	
(GF(7),111,33)	
(GF(5),48,12)	
(GF(2),60,14)	
(GF(2),100,14)	
(GF(2),100,20)	
(GF(3),100,20)	
(GF(4),100,20)	
(GF(5),100,25)	
(GF(5),95,25)	
(GF(2),195,13)	
(GF(3),195,13)	
(GF(3),200,22)	
(GF(2),78,11)	
(GF(2),500,100)	
(GF(5),500,100)	
(GF(5),300,60)	
(GF(11),123,13)	
(GF(13),129,13)	

## Comparaison du temps d'exécution entre minimum\_distance, Brouwer et Zimmerman:

Code	minimum_distance	Brouwer	Zimmerman
(GF(13),58,6)	2 s	1min 8s	47.1 s
(GF(25),28,5)	3.08 s	8.11 s	5.69 s

(GF(5),44,15)	time > 5 min		2min 1s
(GF(3), 50, 13)	1.04 s	2.77 s	1.12 s
(GF(3), 73, 15)	8.83 s	58.4 s	20.8 s
(GF(2),111,33)	4min 23s	1min 14s	1min 16s
(GF(4),73,15)	9min 36s		10min 22s
(GF(4), 73, 11)	2.11 s	39.8 s	36.1 s
(GF(3), 49, 17)	1min 10s	15.7 s	3.15 s
(GF(9), 44, 9)	2min 22s	5min 58s	53.8 s
(GF(4), 51, 16)	time > 7 min	1min 48s	1min 47s
(GF(5), 55, 12)	1min 50s	2min 13s	2min 14s
(GF(3), 80, 17)	1min 23s	4min 59s	3min 18s
(GF(2), 135, 32)	2min 34s	1min 50s	1min 51s
(GF(9), 47, 10)	22min 4s	47min 42s	12min 31s
(GF(9), 47, 10) (GF(2), 128, 32)	22min 4s 2min 17s	47min 42s 1min 7s	12min 31s 1min 7s
(GF(2), 128, 32)	2min 17s	1min 7s	1min 7s
(GF(2), 128, 32) (GF(7), 31, 8)	2min 17s 2.33 s	1min 7s 8.37 s	1min 7s 1.4 s
(GF(2), 128, 32) (GF(7), 31, 8) (GF(7), 96, 32)	2min 17s 2.33 s 2min 19s	1min 7s 8.37 s 9.56 s	1min 7s 1.4 s 9.82 s
(GF(2), 128, 32) (GF(7), 31, 8) (GF(7), 96, 32) (GF(9), 34, 9)	2min 17s  2.33 s  2min 19s  2min 11s	1min 7s 8.37 s 9.56 s 2min 59s	1min 7s 1.4 s 9.82 s 30.8 s
(GF(2), 128, 32) (GF(7), 31, 8) (GF(7), 96, 32) (GF(9), 34, 9) (GF(7),39,10)	2min 17s  2.33 s  2min 19s  2min 11s  1min 46s	1min 7s 8.37 s 9.56 s 2min 59s 3min 12s	1min 7s  1.4 s  9.82 s  30.8 s  26.4 s
(GF(2), 128, 32) (GF(7), 31, 8) (GF(7), 96, 32) (GF(9), 34, 9) (GF(7),39,10) (GF(11),44,8)	2min 17s  2.33 s  2min 19s  2min 11s  1min 46s  1min 14s	1min 7s  8.37 s  9.56 s  2min 59s  3min 12s  7min 53s	1min 7s  1.4 s  9.82 s  30.8 s  26.4 s  5min 23s
(GF(2), 128, 32) (GF(7), 31, 8) (GF(7), 96, 32) (GF(9), 34, 9) (GF(7),39,10) (GF(11),44,8) (GF(7),49,10)	2min 17s  2.33 s  2min 19s  2min 11s  1min 46s  1min 14s  1min 57s	1min 7s  8.37 s  9.56 s  2min 59s  3min 12s  7min 53s  15min 39s	1min 7s  1.4 s  9.82 s  30.8 s  26.4 s  5min 23s  2min 59s
(GF(2), 128, 32) (GF(7), 31, 8) (GF(7), 96, 32) (GF(9), 34, 9) (GF(7),39,10) (GF(11),44,8) (GF(7),49,10) (GF(7),34,7)	2min 17s  2.33 s  2min 19s  2min 11s  1min 46s  1min 14s  1min 57s  390 ms	1min 7s  8.37 s  9.56 s  2min 59s  3min 12s  7min 53s  15min 39s  3.54 s	1min 7s  1.4 s  9.82 s  30.8 s  26.4 s  5min 23s  2min 59s  960 ms
(GF(2), 128, 32) (GF(7), 31, 8) (GF(7), 96, 32) (GF(9), 34, 9) (GF(7),39,10) (GF(11),44,8) (GF(7),49,10) (GF(7),34,7) (GF(7),36,9)	2min 17s  2.33 s  2min 19s  2min 11s  1min 46s  1min 14s  1min 57s  390 ms  14.6 s	1min 7s  8.37 s  9.56 s  2min 59s  3min 12s  7min 53s  15min 39s  3.54 s	1min 7s  1.4 s  9.82 s  30.8 s  26.4 s  5min 23s  2min 59s  960 ms  2.24 s