méthode
Newton-Raphson



$k^3 - 6k^2 + 11k - 6 = 0$



sur 8 décimales avec
32 itérations maximum

Racine	**1,00000**	1,00000000	trouvée en	**6**	itérations depuis la racine approchante	**0,54545455**
		sur 8 décimales				

	ax^7	bx^6	cx^5	dx^4	fx^3	gx^2	hx	j		
f(x) =	**0,00000000**	**0,00000000**	**0,00000000**	**0,00000000**	**1,00000000**	**-6,00000000**	**11,00000000**	**-6,00000000**		
f'(x) =	0,00000000	0,00000000	0,00000000	0,00000000	0,00000000	3,00000000	-12,00000000	11,00000000		

itération #1	**0,54545455**	← -j/h = racine approchante (méthode Whittaker-Bernoulli) de la fonction ci-dessus								
f(0,54545455)	0,00000000	0,00000000	0,00000000	0,00000000	0,16228400	-1,78512397	6,00000000	-6,00000000	=	-1,62283997
f'(0,54545455)	0,00000000	0,00000000	0,00000000	0,00000000	0,00000000	0,89256198	-6,54545455	11,00000000	=	5,34710744
itération #2	0,84895321	= résultat de l'itération #1 - f(x)/f'(x)								
f(0,84895321)	0,00000000	0,00000000	0,00000000	0,00000000	0,61185888	-4,32432932	9,33848532	-6,00000000	=	-0,37398513
f'(0,84895321)	0,00000000	0,00000000	0,00000000	0,00000000	0,00000000	2,16216466	-10,18743853	11,00000000	=	2,97472613
itération #3	0,97467407	= résultat de l'itération #2 - f(x)/f'(x)								
f(0,97467407)	0,00000000	0,00000000	0,00000000	0,00000000	0,92593018	-5,69993727	10,72141478	-6,00000000	=	-0,05259231
f'(0,97467407)	0,00000000	0,00000000	0,00000000	0,00000000	0,00000000	2,84996863	-11,69608885	11,00000000	=	2,15387978
itération #4	0,99909155	= résultat de l'itération #3 - f(x)/f'(x)								
f(0,99909155)	0,00000000	0,00000000	0,00000000	0,00000000	0,99727712	-5,98910353	10,99000703	-6,00000000	=	-0,00181938
f'(0,99909155)	0,00000000	0,00000000	0,00000000	0,00000000	0,00000000	2,99455176	-11,98909858	11,00000000	=	2,00545319
itération #5	0,99999876	= résultat de l'itération #4 - f(x)/f'(x)								
f(0,99999876)	0,00000000	0,00000000	0,00000000	0,00000000	0,99999629	-5,99998518	10,99998641	-6,00000000	=	-0,00000247
f'(0,99999876)	0,00000000	0,00000000	0,00000000	0,00000000	0,00000000	2,99999259	-11,99998518	11,00000000	=	2,00000741
itération #6	1,00000000	= résultat de l'itération #5 - f(x)/f'(x)								
f(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	1,00000000	-6,00000000	11,00000000	-6,00000000	=	0,00000000
f'(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	0,00000000	3,00000000	-12,00000000	11,00000000	=	2,00000000
itération #7	1,00000000	= résultat de l'itération #6 - f(x)/f'(x)								
f(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	1,00000000	-6,00000000	11,00000000	-6,00000000	=	0,00000000
f'(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	0,00000000	3,00000000	-12,00000000	11,00000000	=	2,00000000
itération #8	1,00000000	= résultat de l'itération #7 - f(x)/f'(x)								
f(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	1,00000000	-6,00000000	11,00000000	-6,00000000	=	0,00000000
f'(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	0,00000000	3,00000000	-12,00000000	11,00000000	=	2,00000000
itération #9	1,00000000	= résultat de l'itération #8 - f(x)/f'(x)								

voir rond jaune

f(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	1,00000000	-6,00000000	11,00000000	-6,00000000	=	0,00000000
f'(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	0,00000000	3,00000000	-12,00000000	11,00000000	=	2,00000000

itération #10	1,00000000	= résultat de l'itération #9 - f(x)/f'(x)

f(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	1,00000000	-6,00000000	11,00000000	-6,00000000	=	0,00000000
f'(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	0,00000000	3,00000000	-12,00000000	11,00000000	=	2,00000000

itération #11	1,00000000	= résultat de l'itération #10 - f(x)/f'(x)

f(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	1,00000000	-6,00000000	11,00000000	-6,00000000	=	0,00000000
f'(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	0,00000000	3,00000000	-12,00000000	11,00000000	=	2,00000000

itération #12	1,00000000	= résultat de l'itération #11 - f(x)/f'(x)

f(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	1,00000000	-6,00000000	11,00000000	-6,00000000	=	0,00000000
f'(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	0,00000000	3,00000000	-12,00000000	11,00000000	=	2,00000000

itération #13	1,00000000	= résultat de l'itération #12 - f(x)/f'(x)

f(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	1,00000000	-6,00000000	11,00000000	-6,00000000	=	0,00000000
f'(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	0,00000000	3,00000000	-12,00000000	11,00000000	=	2,00000000

itération #14	1,00000000	= résultat de l'itération #13 - f(x)/f'(x)

f(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	1,00000000	-6,00000000	11,00000000	-6,00000000	=	0,00000000
f'(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	0,00000000	3,00000000	-12,00000000	11,00000000	=	2,00000000

itération #15	1,00000000	= résultat de l'itération #14 - f(x)/f'(x)

f(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	1,00000000	-6,00000000	11,00000000	-6,00000000	=	0,00000000
f'(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	0,00000000	3,00000000	-12,00000000	11,00000000	=	2,00000000

itération #16	1,00000000	= résultat de l'itération #15 - f(x)/f'(x)

f(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	1,00000000	-6,00000000	11,00000000	-6,00000000	=	0,00000000
f'(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	0,00000000	3,00000000	-12,00000000	11,00000000	=	2,00000000

itération #17	1,00000000	= résultat de l'itération #16 - f(x)/f'(x)

f(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	1,00000000	-6,00000000	11,00000000	-6,00000000	=	0,00000000
f'(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	0,00000000	3,00000000	-12,00000000	11,00000000	=	2,00000000

itération #18	1,00000000	= résultat de l'itération #17 - f(x)/f'(x)

f(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	1,00000000	-6,00000000	11,00000000	-6,00000000	=	0,00000000
f'(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	0,00000000	3,00000000	-12,00000000	11,00000000	=	2,00000000

itération #19	1,00000000	= résultat de l'itération #18 - f(x)/f'(x)

f(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	1,00000000	-6,00000000	11,00000000	-6,00000000	=	0,00000000
f'(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	0,00000000	3,00000000	-12,00000000	11,00000000	=	2,00000000

itération #20	1,00000000	= résultat de l'itération #19 - f(x)/f'(x)

f(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	1,00000000	-6,00000000	11,00000000	-6,00000000	=	0,00000000
f'(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	0,00000000	3,00000000	-12,00000000	11,00000000	=	2,00000000

itération #21	1,00000000	= résultat de l'itération #20 - f(x)/f'(x)

f(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	1,00000000	-6,00000000	11,00000000	-6,00000000	=	0,00000000
f'(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	0,00000000	3,00000000	-12,00000000	11,00000000	=	2,00000000

itération #22	1,00000000	= résultat de l'itération #21 - f(x)/f'(x)

f(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	1,00000000	-6,00000000	11,00000000	-6,00000000	=	0,00000000
f'(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	0,00000000	3,00000000	-12,00000000	11,00000000	=	2,00000000

itération #23	1,00000000	= résultat de l'itération #22 - f(x)/f'(x)

f(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	1,00000000	-6,00000000	11,00000000	-6,00000000	=	0,00000000
f'(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	0,00000000	3,00000000	-12,00000000	11,00000000	=	2,00000000

itération #24	1,00000000	= résultat de l'itération #23 - f(x)/f'(x)

f(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	1,00000000	-6,00000000	11,00000000	-6,00000000	=	0,00000000
f'(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	0,00000000	3,00000000	-12,00000000	11,00000000	=	2,00000000

itération #25	1,00000000	= résultat de l'itération #24 - f(x)/f'(x)

f(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	1,00000000	-6,00000000	11,00000000	-6,00000000	=	0,00000000
f'(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	0,00000000	3,00000000	-12,00000000	11,00000000	=	2,00000000

itération #26	1,00000000	= résultat de l'itération #25 - f(x)/f'(x)

f(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	1,00000000	-6,00000000	11,00000000	-6,00000000	=	0,00000000
f'(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	0,00000000	3,00000000	-12,00000000	11,00000000	=	2,00000000

itération #27	1,00000000	= résultat de l'itération #26 - f(x)/f'(x)

f(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	1,00000000	-6,00000000	11,00000000	-6,00000000	=	0,00000000
f'(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	0,00000000	3,00000000	-12,00000000	11,00000000	=	2,00000000

itération #28	1,00000000	= résultat de l'itération #27 - f(x)/f'(x)

f(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	1,00000000	-6,00000000	11,00000000	-6,00000000	=	0,00000000
f'(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	0,00000000	3,00000000	-12,00000000	11,00000000	=	2,00000000

itération #29	1,00000000	= résultat de l'itération #28 - f(x)/f'(x)

f(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	1,00000000	-6,00000000	11,00000000	-6,00000000	=	0,00000000

f'(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	0,00000000	3,00000000	-12,00000000	11,00000000	=	2,00000000

itération #30	1,00000000	= résultat de l'itération #29 - f(x)/f'(x)

f(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	1,00000000	-6,00000000	11,00000000	-6,00000000	=	0,00000000
f'(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	0,00000000	3,00000000	-12,00000000	11,00000000	=	2,00000000

itération #31	1,00000000	= résultat de l'itération #30 - f(x)/f'(x)

f(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	1,00000000	-6,00000000	11,00000000	-6,00000000	=	0,00000000
f'(1,00000000)	0,00000000	0,00000000	0,00000000	0,00000000	0,00000000	3,00000000	-12,00000000	11,00000000	=	2,00000000

itération #32	1,00000000	= résultat de l'itération #31 - f(x)/f'(x) et FIN

FIN