

Console

n	h F(xn) Xn+1	c	xn k1		f(xn) v	
0	0.5	0.5	2.000000	1.416147	0.343726	-0.2433831
3	1.67796		1.390305			
1	0.5	0.5	1.390305	-0.398904	0.335148	0.06684592
	-0.41526		1.444993			
2	0.5	0.5	1.444993	-0.235486	0.334214	0.03935126
	-0.24673		1.479864			
3	0.5	0.5	1.479864	-0.131078	0.333793	0.02187642
	-0.13797		1.500299			
4	0.5	0.5	1.500299	-0.069842	0.333610	0.01164996
	-0.07373		1.511530			
5	0.5	0.5	1.511530	-0.036173	0.333528	0.00603238
	-0.03825		1.517448			
6	0.5	0.5	1.517448	-0.018427	0.333491	0.00307264
	-0.01950		1.520491			
7	0.5	0.5	1.520491	-0.009303	0.333474	0.00155108
	-0.00985		1.522034			
8	0.5	0.5	1.522034	-0.004674	0.333465	0.00077932
	-0.00495		1.522812			
9	0.5	0.5	1.522812	-0.002343	0.333461	0.00039061
	-0.00248		1.523202			
10	0.5	0.5	1.523202	-0.001173	0.333459	0.00019555
	-0.00124		1.523397			

Therefore, the solution is 1.5233972652