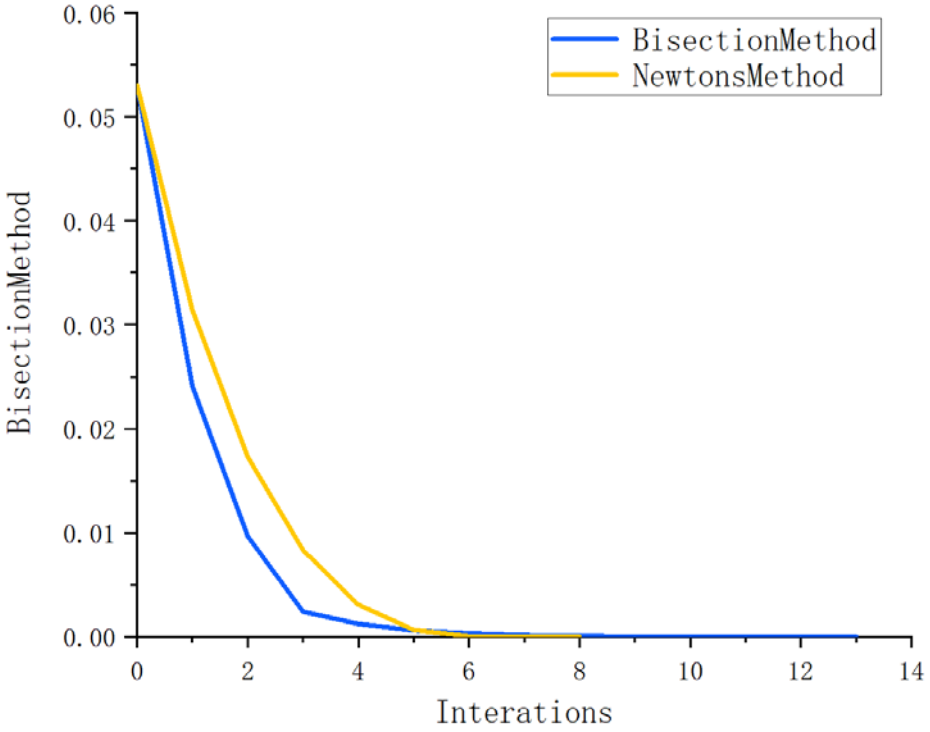

As can be seen from the figure above, Newton's method reached the accuracy requirement after 8 iterations, while bisection method needs 13 iterations. Relatively speaking, Newton's method has a faster convergence rate and higher solution efficiency. However, the convergence of Newton's method is related to the selection of initial value, so the bisection method has its advantages in some cases. For example, the bisection method has a relatively faster convergence rate in the initial stage of iteration.

Here is the data of this assignment:

Bisection	BM's approximation error	Newton's	NM's approximation error
0.343036	0.053036	0.343036	0.053036
0.314098	0.024098	0.321409	0.031409
0.299629	0.009629	0.307273	0.017273
0.292395	0.002395	0.298309	0.008309
0.288777	0.001223	0.293073	0.003073
0.290586	0.000586	0.290646	0.000646
0.289682	0.000318	0.290038	0.000038
0.290134	0.000134	0.290000	0.000000
0.289908	0.000092	0.290000	0.000000
0.290021	0.000021		
0.289964	0.000036		
0.289992	0.000008		
0.290007	0.000007		
0.289999	0.000001		