Output of bisection method:

x0: 0.343036

x1: 0.314098

x2: 0.299629

x3: 0.292395

x4: 0.288777

x5: 0.290586

x6: 0.289682

x7: 0.290134

x8: 0.289908

x9: 0.290021

x10: 0.289964

x11: 0.289992

Output of Newton's method:

x0: 0.343036

x1: 0.321409

x2: 0.307273

x3: 0.298309

x4: 0.293073

x5: 0.290646

x6: 0.290038

x7: 0.29

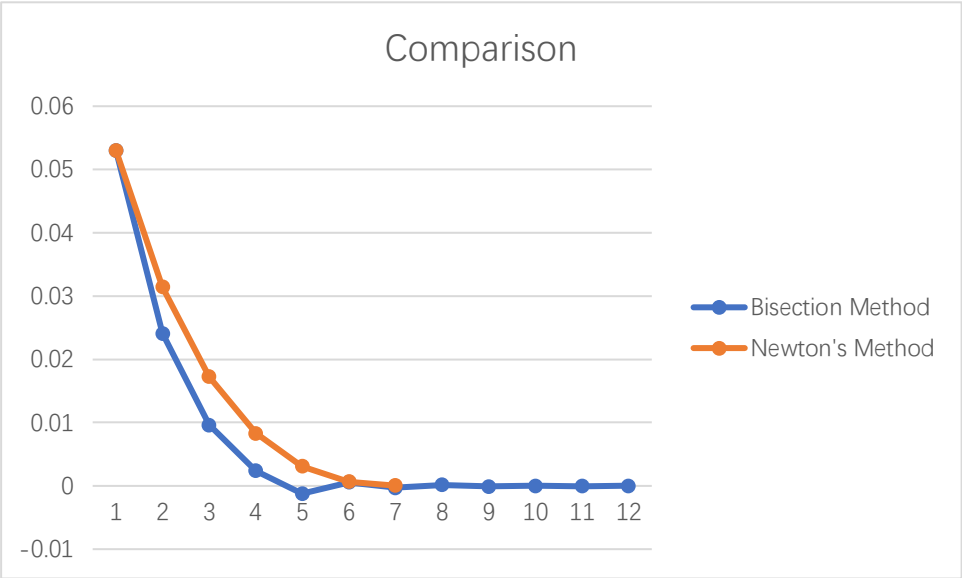

Figure 1: comparison between two methods

Conclusion

By analyzing fig.1, we can tell that when less precision is required, we could approximate the exact value at a faster speed with bisection method than Newton's Method. However, after the approximation has got close enough to the exact value, Newton's Method approaches the root with higher accuracy within same number of interactions. To conclude, the required precision determines which method to choose.