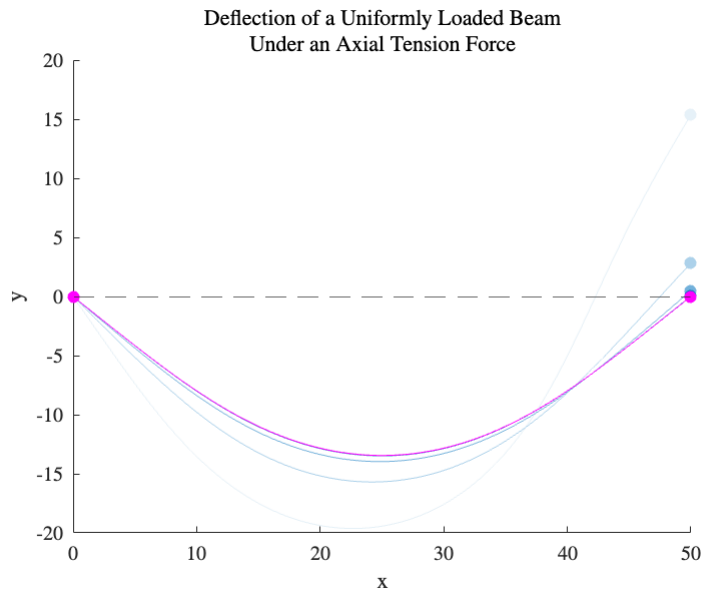


Lab 7

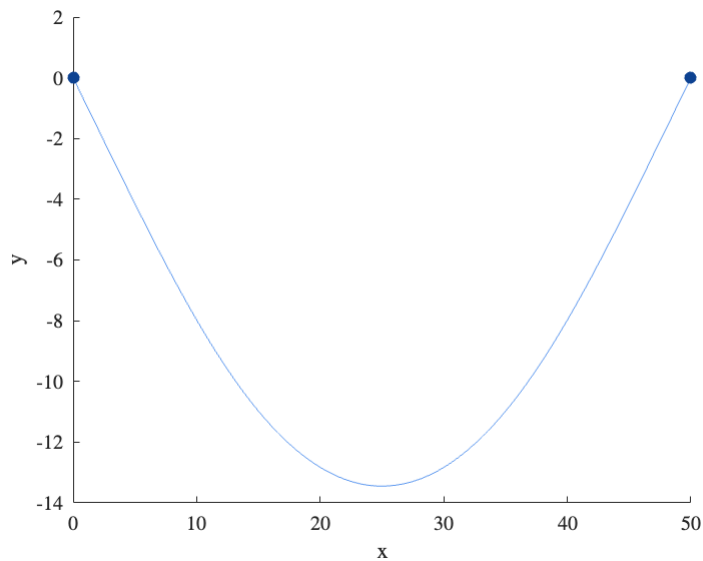
Jessie Li // November 8, 2023

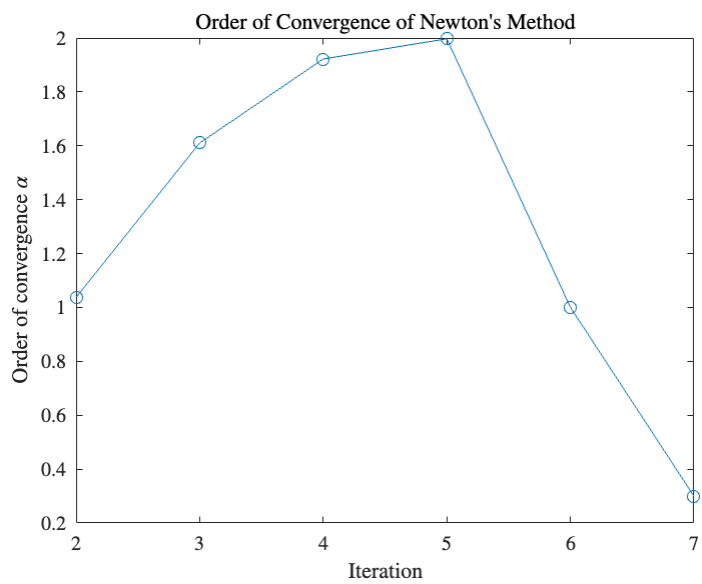
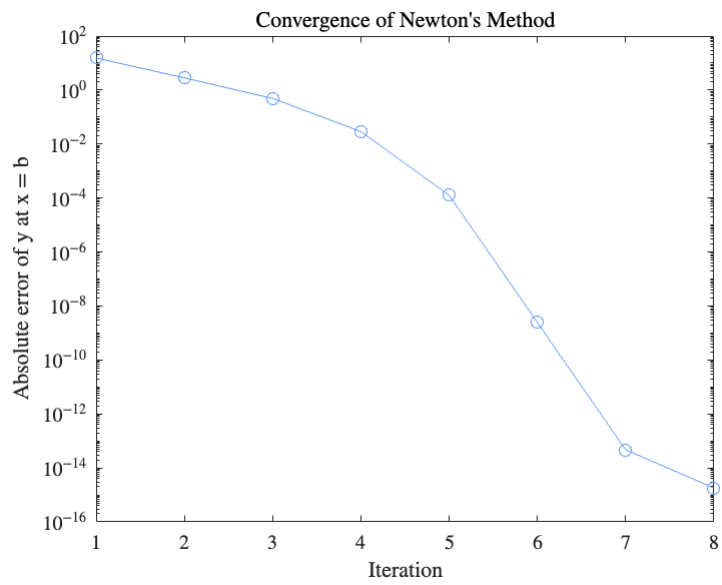
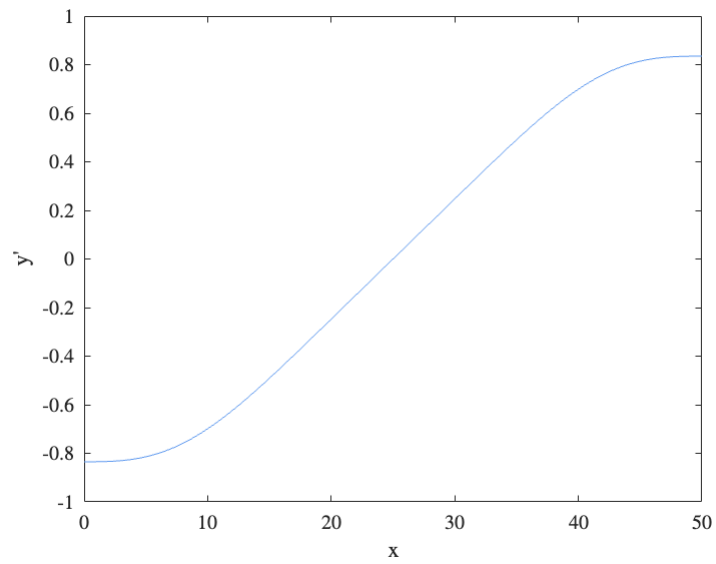
1. Solution to a nonlinear boundary value problem for the deflection of a uniformly loaded, long rectangular beam under an axial tension force

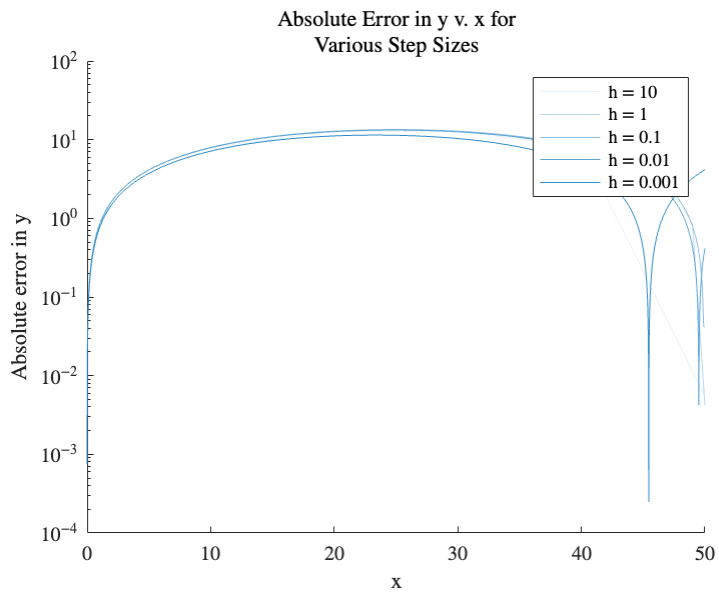
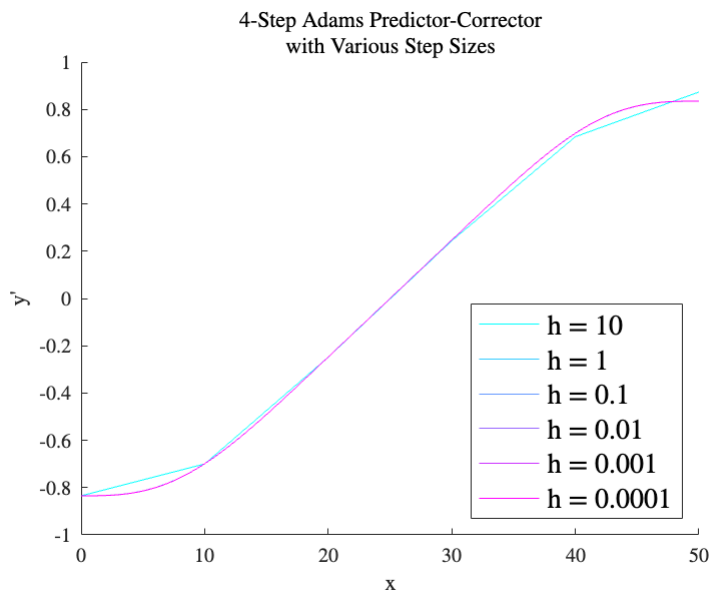
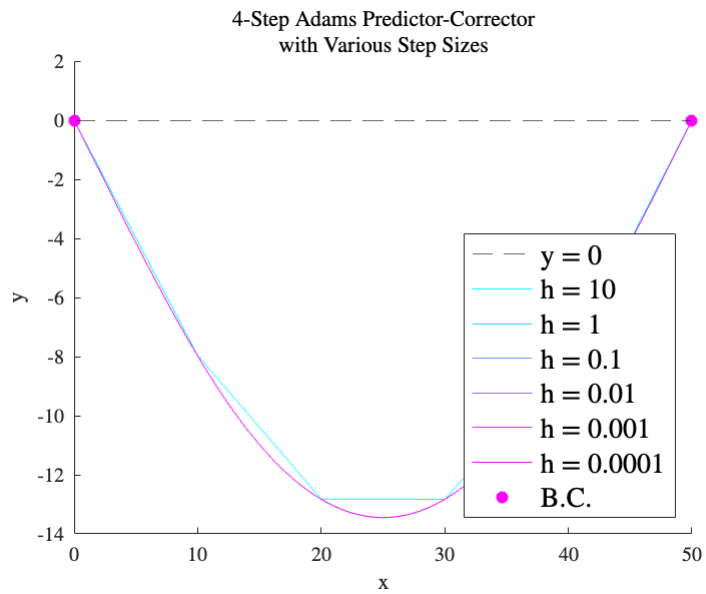
```
main1
```

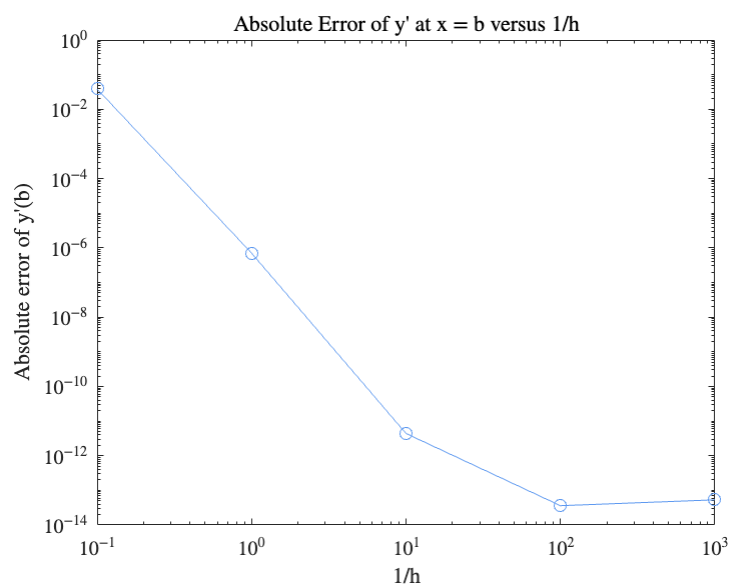
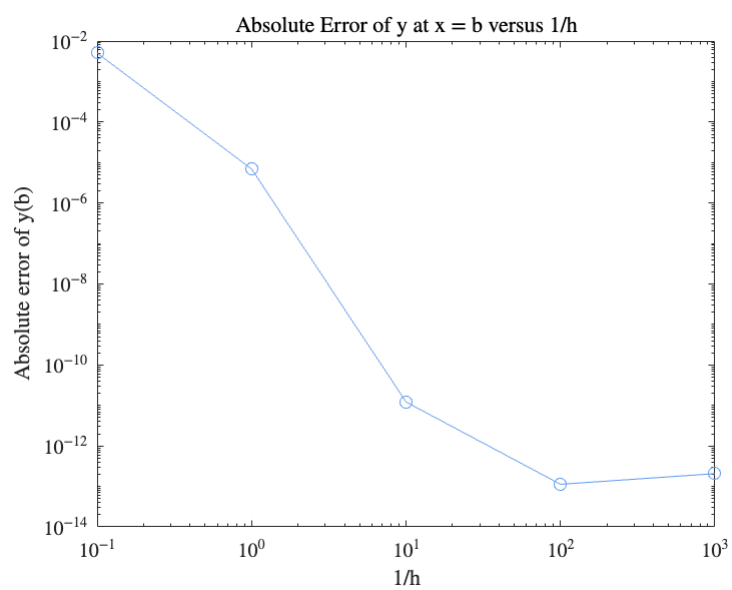
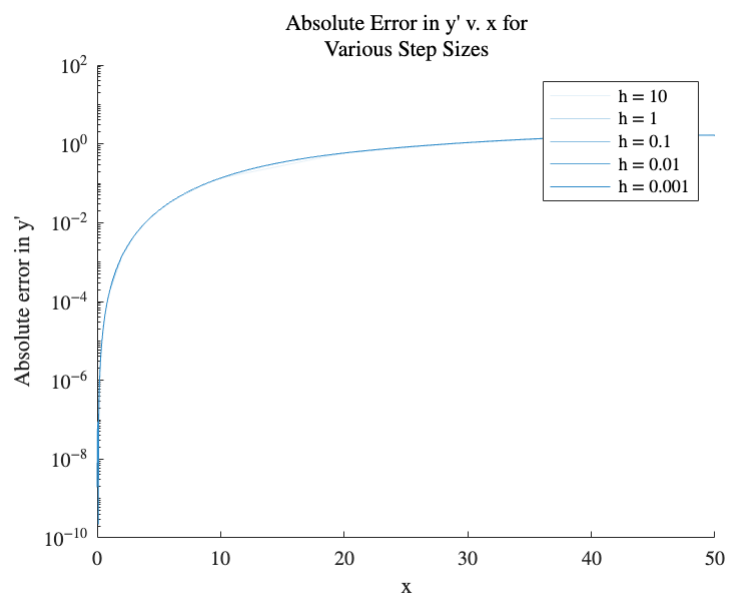


found $u = -0.83467$ after 8 iterations





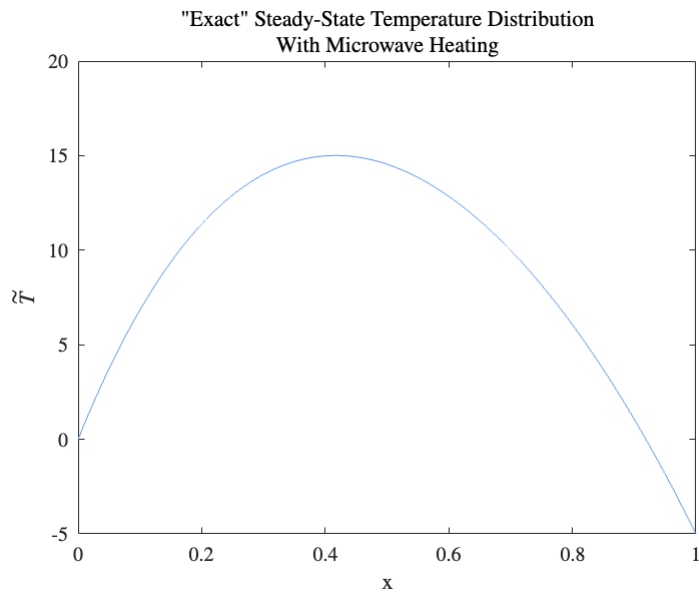
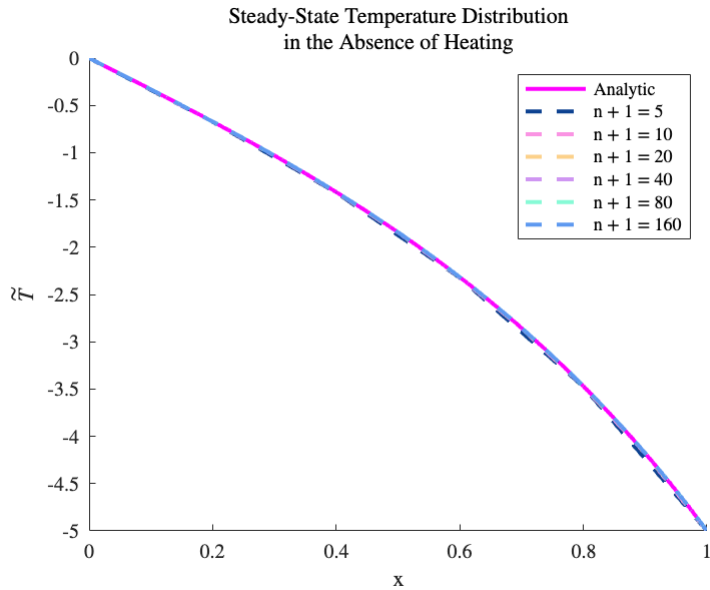




2. Solution to a simple 1D model for heat transfer in tissue with temperature-dependent energy removal due to blood flow and superficial microwave heating

```
main2
```

```
ans = 0.0048  
ans = 0.0012  
ans = 3.0349e-04  
ans = 7.5931e-05  
ans = 1.8998e-05  
ans = 4.7496e-06
```



```
ans = 0.1724  
ans = 0.0435  
ans = 0.0110  
ans = 0.0027  
ans = 6.8697e-04  
ans = 1.7178e-04
```

