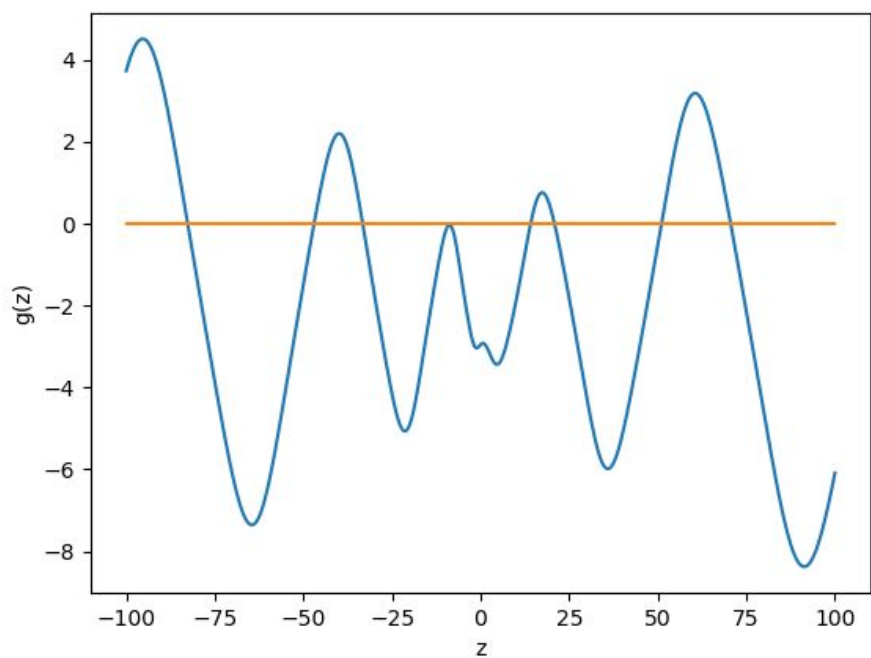


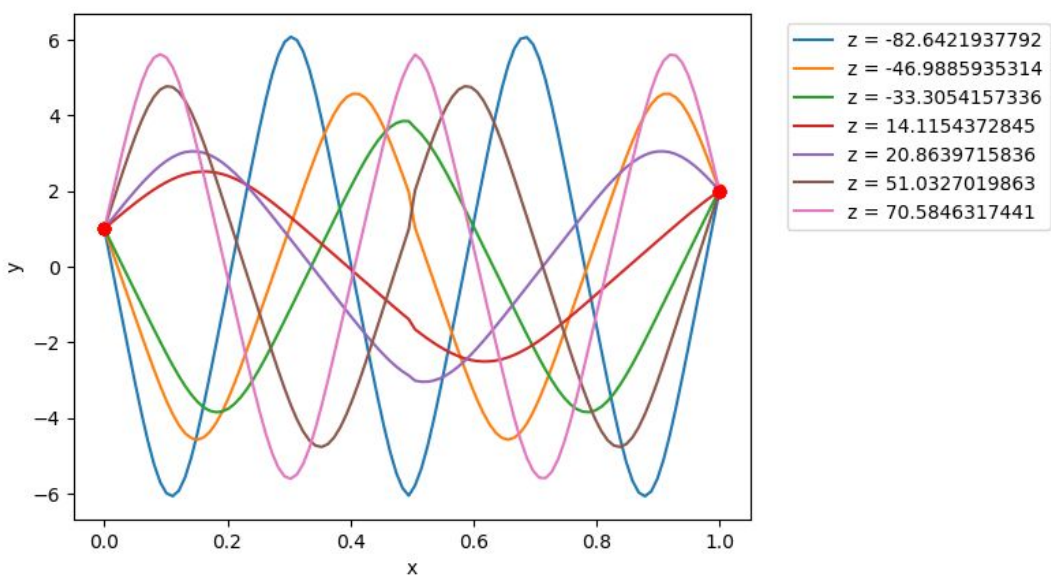
Rachel Buttry  
PHYS 305  
Homework #5

### Problem 1

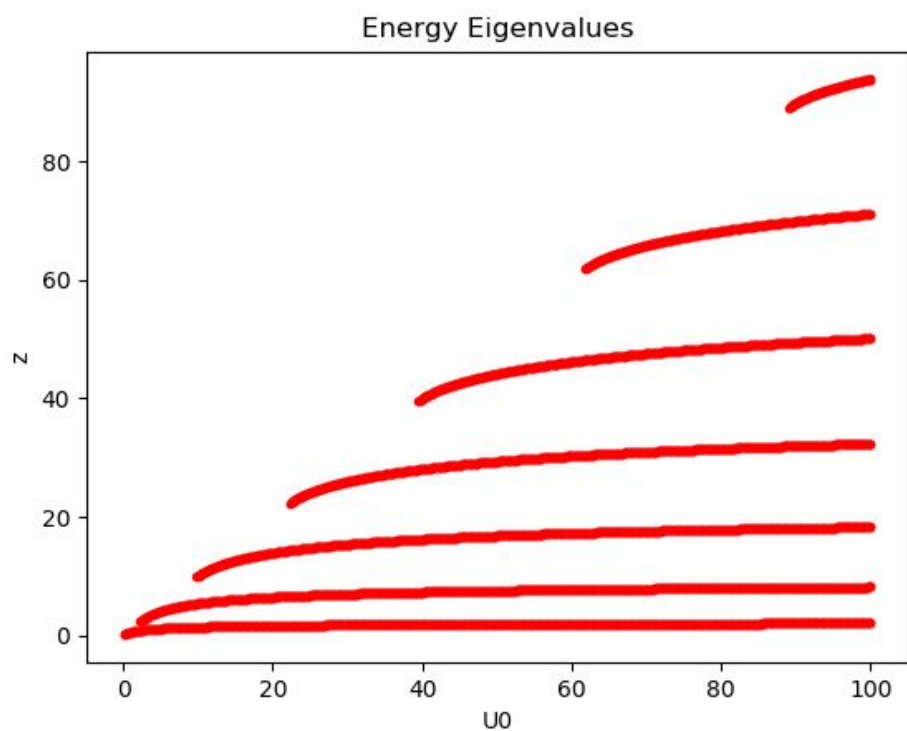
Plot of  $g(z)$  which was used to “zoom” in on ranges to find the zeros.



The solutions are:

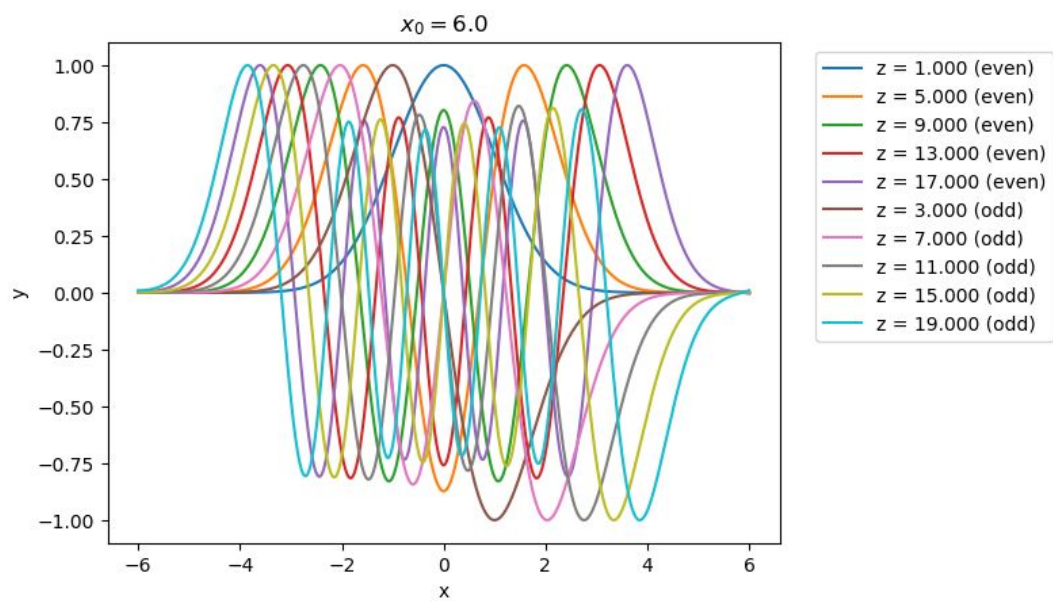


## Problem 2

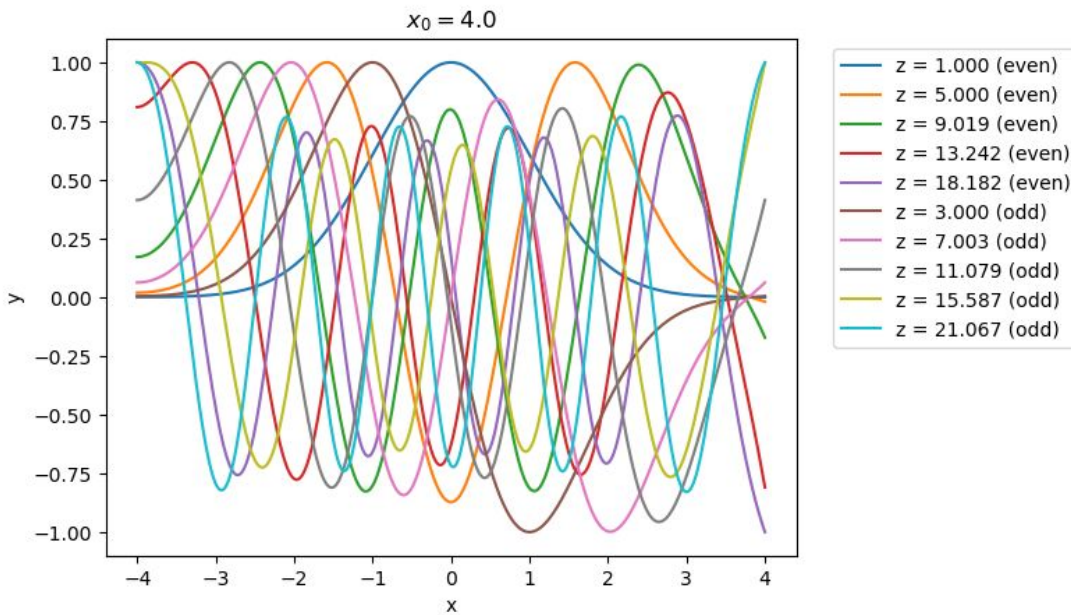


## Problem 3

NOTE: the solutions are normalized



When  $x_0 = 4$ , the eigenvalues deviate and so the function is have to go to zero more quickly.



#### Problem 4

NOTE: the solutions are normalized

