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Module 6 - Programming Assignment Results

Without Optimization

Function	Interval	Root	# of func evaluations
$f(x) = xcos(x) + sinx()$	[2, 3]	2.028757838110434	9
$f(x) = xcos(x) + sinx()$	[4, 5]	4.913180439434884	8
$f(x) = e^{-x} - x$	[0, 1]	0.567143290409784	9

With Optimization

Function	Interval	Root	# of func evaluations
$f(x) = xcos(x) + sinx()$	[2, 3]	2.0287578381104345	9
$f(x) = xcos(x) + sinx()$	[4, 5]	4.913180439434884	8
$f(x) = e^{-x} - x$	[0, 1]	0.567143290409784	9

I wasn't able to get the optimization to work in the end. I tried many things to see if it could reduce it but wasn't able to. The optimization did somewhat refine the root of the [2, 3] interval by one extra digit.