1. Find all the roots of the equation $x^3 + 0.6x^2 - 22x + 18 = 0$ using the **Regula falsi method**. Run the calculation within [-6, -4], [0, 2], and [3, 4] and do the iteration for 10 times.

[-6, -4]

i	a	b	xNS	FxNS	toli
1	-6.000000	-4.000000	-5.075000	14.393578	1.000000
2	-6.000000	-5.075000	-5.301454	2.495657	0.462500
3	-6.000000	-5.301454	-5.338629	0.394365	0.349273
4	-6.000000	-5.338629	-5.344452	0.061390	0.330686
5	-6.000000	-5.344452	-5.345357	0.009534	0.327774
6	-6.000000	-5.345357	-5.345497	0.001480	0.327322
7	-6.000000	-5.345497	-5.345519	0.000230	0.327251
8	**-6.000000**	**-5.345519**	**-5.345523**	**0.000036**	**0.327240**
9	**-6.000000**	**-5.345523**	**-5.345523**	**0.000006**	**0.327239**
10	**-6.000000**	**-5.345523**	**-5.345523**	**0.000001**	**0.327238**

[0, 2]

1	0.000000	2.000000	1.071429	-3.652697	1.000000
2	0.000000	1.071429	0.890684	-0.412465	0.535714
3	0.000000	0.890684	0.870732	-0.041026	0.445342
4	0.000000	0.870732	0.868752	-0.004024	0.435366
5	0.000000	0.868752	0.868557	-0.000394	0.434376
6	0.000000	0.868557	0.868538	-0.000039	0.434279
7	0.000000	0.868538	0.868536	-0.000004	0.434269
8	**0.000000**	**0.868536**	**0.868536**	**-0.000000**	**0.434268**
9	**0.000000**	**0.868536**	**0.868536**	**-0.000000**	**0.434268**
10	**0.000000**	**0.868536**	**0.868536**	**-0.000000**	**0.434268**

[3, 4]

극	1	3.000000	4.000000	3.812500	-1.738623	0.500000
2	3.812500	4.000000	3.873563	-0.094856	0.093750	
3	3.873563	4.000000	3.876809	-0.004939	0.063219	
4	3.876809	4.000000	3.876978	-0.000256	0.061596	
5	3.876978	4.000000	3.876986	-0.000013	0.061511	
6	3.876986	4.000000	3.876987	-0.000001	0.061507	
7	3.876987	4.000000	3.876987	-0.000000	0.061507	
8	**3.876987**	**4.000000**	**3.876987**	**-0.000000**	**0.061507**	
9	**3.876987**	**4.000000**	**3.876987**	**-0.000000**	**0.061507**	
10	**3.876987**	**4.000000**	**3.876987**	**-0.000000**	**0.061507**	

2. Modify the function **NewtonRoot** that is used in Example 2-2, such that the output will have three arguments. Use the function to solve the equation in Ex. 2-2.

[Xs, FXs, iact] = NewtonRootMod(Fun, FunDer, Xest, Err, imax)
Xs: Solution, FXs: value of the function at the solution, iact: actual number of iterations.