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To finish this lab modify lines 2 and ~~8~~ in newton3d.jl to solve the correct equation starting with the correct value of x_0 . Run the program placing

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1 # newton3d.jl -- Perform five iterations of Newton's method
2 f1(x,y,z) = -3x^(-3)*y^(-3)*z^3 +
3             x*y^(-3)*z^(-2) - 0.9812 + x^3*z
4 f2(x,y,z) = -x^2*z^(-1) + 3x*z^2 + 2.405
5 f3(x,y,z) = -2x*z^3 + z + 23.38 -
6             2x^(-1)*y^2*z^(-1) + 3x^(-1)*y^2*z
7 f(x,y,z) = [f1(x,y,z), f2(x,y,z), f3(x,y,z)]
8
9 x0 = [1.155, -3.768, 0.4616]

```

Need
changed

Extra credit. Use arbitrary precision arithmetic (if possible) to verify the order of convergence

$$\frac{\log \varepsilon_{k+1}}{\log \varepsilon_k} \quad \text{where} \quad \varepsilon_k = \|x^{(k)} - x^{(k+1)}\|$$

and show this ratio approaches 2.