

Source: [KBe2020math530refExr0nRetIndex](#)

Solve Equations

Operation timed out. Arithmetic errors.

Read 1.B and 1.C

1.35 Example

- a) If $b = 0$ then we can divide all x_3 by 5 and combine the last two terms to get F^3 , which is a vector space, without loss of generality. If not, then when you try to multiply by a scalar then you will find that the above reasoning breaks (i think).
 - b) $f(x) = 0$ is continuous, so the additive identity exists. All sums of continuous functions result in continuous functions, so it is closed under addition. And all scalar multiples also work out.
 - c) slightly awkward: i don't actually know what a differentiable real valued function is. #todo-exr0n
 - d) (see above)
 - e) what does it mean for a sequence of complex numbers to have a limit 0? but I think you can use the same argument that the missing elements are just "collapsed" into one invisible one.
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