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Then we have xa= 1 and so ax= 1 since a is invertible and a 1 = x:(See solution 6) It follows that (yz)x= 1:Hence yzx= 1: On the other hand, if xyz= 1;it is not always true that yxz= 1:To see this, let Gbe the group of 2 2 real matrices and let x= 1 2 0 2! y= 0 1 2 1! and z= 1=2 3=4 1 1!: Then xyz= 1 0 0 1! = 1EXERCISES AND SOLUTIONS IN GROUPS RINGS AND FIELDSThe converse follows from exercise 1 and exercise 2, (ii). (ii) If f(x) is nilpotent, then we can apply induction to nto show that all its coefficients are nilpotent. The case n= 0 is a tautology. In the general case, it’s apparent that the leading coefficient will be am nfor suitable m∈N hence aSolutions to Atiyah and MacDonald’s Introduction to ...Commutative Algebra ByAllenALTMAN and StevenKLEIMAN Version of September 1, 2013: 13Ed.tex ... “provided hints, and sometimes complete solutions, to the hard” exercises. More-over, they developed a significant amount of the main content in the exercises. 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