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| Book Name: | **Finite Abelian Groups, Elliptic Curves, Blockchain with Hashing and Graphs** |
| Manuscript Number: | **Ms\_BPR\_3842.2** |
| Title of the Manuscript: | **Introductory Essentials to Finite Fields** |
| Type of the Article | **Book Chapter** |

**General guidelines for the Peer Review process:**

This Book’s peer review policy states that **NO** manuscript should be rejected only on the basis of ‘**lack of Novelty’**, provided the manuscript is scientifically robust and technically sound.

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| PART 1: Review Comments | | |
| Compulsory REVISION comments | Reviewer’s comment | Author’s Feedback *(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)* |
| **Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.** | The manuscript provides a foundational exploration of finite fields and their associated mathematical properties. It delves into essential definitions, construction methods, and applications of finite fields, which are critical in modern mathematics, particularly in areas like coding theory, cryptography, and computational algebra. The structured approach of posing key questions and systematically answering them offers clarity and guides further exploration in this field.  I appreciate the manuscript for its detailed explanations and logical flow, which make complex concepts accessible. However, the density of technical content might make it challenging for readers who lack a strong mathematical background. Overall, this manuscript is a valuable resource for advancing understanding in the mathematical and scientific community. |  |
| **Is the title of the article suitable?**  **(If not please suggest an alternative title)** | The title of the manuscript, "Introductory Essentials to Finite Fields," is suitable for the content |  |
| Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here. | No abstract in the manuscript. |  |
| **Are subsections and structure of the manuscript appropriate?** |  |  |
| **Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.** | The manuscript demonstrates scientific robustness and technical soundness through its precise definitions, logical progression, and well-documented proofs of key mathematical concepts related to finite fields. It rigorously addresses foundational questions about extension and splitting fields, irreducible polynomials, and key theorems like Wedderburn's theorem, ensuring a comprehensive understanding of the subject. The mathematical arguments are detailed and supported by examples, exercises, and solutions, which strengthen the manuscript's credibility and pedagogical value. Overall, the manuscript provides a methodical and accurate exploration of finite fields, making it a reliable resource for students and researchers in mathematics and related fields. |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.**  **-** | Consider adding recent papers or reviews on finite fields' applications in technology, such as post-quantum cryptography or modern coding theory. |  |
| Minor REVISION commentsIs the language/English quality of the article suitable for scholarly communications? |  Original: "In order to not get confused by the expression..."   Suggested: "To avoid confusion with the expression..."   Original: "This construction allows to have a field of pn elements..."   Suggested: "This construction enables the creation of a field with pn elements..."   Original: "It is important to note that for example in French language, a skew field is called 'corps gauche' and if a field is commutative, we add the qualificative so we get 'corps commutatif.'"   Suggested: "For example, in French, a skew field is called 'corps gauche,' and a commutative field is referred to as 'corps commutatif.'"   Original: "The result can also be seen as a consequence of the Skolem–Noether theorem..."   Suggested: "This result also follows from the Skolem–Noether theorem..."   Original: "Since we are more interested in our team to rely on Abelian group-theoretic proofs for many problems as in [36, 10, 1, 37, 2], we also suggest to read the non-detailed but interesting proof done by Hans Zassenhaus in 1953."   Suggested: "Our team focuses on Abelian group-theoretic proofs for many problems (see references [36, 10, 1, 37, 2]). We also recommend the concise yet interesting proof by Hans Zassenhaus (1953)." |  |
| Optional/General comments |  |  |

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| **PART 2:** | | |
|  | **Reviewer’s comment** | **Author’s comment *(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*** |
| **Are there ethical issues in this manuscript?** | ***(If yes, Kindly please write down the ethical issues here in details)*** |  |

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| **Reviewer Details:** | |
| **Name:** | **Anonymous reviewer (Only for this stage as per Review policy)** |
| **Department, University & Country** |  |