

Abstract Algebra Summary

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1 The System of Natural Number

Definition 1.1. The product set $S \times T$ of two arbitrary sets S and T is a set of pairs (s, t) , $s \in S, t \in T$

In general $\prod S_i = S_1 \times S_2 \times \cdots \times S_r$ is the collection of r -tuples (s_1, s_2, \cdots, s_r) , where $s_i \in S_i$

If (s_1, s_2, \cdots, s_r) and $(s'_1, s'_2, \cdots, s'_r)$ are equal, we have $s_1 = s'_1, s_2 = s'_2, \cdots, s_r = s'_r$

Definition 1.2. content...

2 Groups

3 Rings

4 Fields