

1. Every field is a ring.
  - A True
  - B False
  
2. Every ring is a field.
  - A True
  - B False
  
3. The  $n \times n$  matrices form an abelian group under addition.
  - A True
  - B False
  
4. If you have a map  $f: X \rightarrow Y$  and  $|X| > |Y|$ , which of the following is necessarily true?
  - A  $f$  is not injective
  - B  $f$  is not surjective
  - C  $f$  is a permutation
  
5. Which of the following is equivalent to "P implies Q"?
  - A "not-P implies not-Q"
  - B "not-P if and only if not-Q"
  - C "Q implies not P"
  - D "not-Q implies not-P"