Sample Exam

- Write out truth table for P and Q and the truth table for $-P$ or $-Q$.
- Write the negative of the following statement as an "and" statement. $P(n)$: n is an odd integer or n is divisible by 4.
- Prove the statement that if n is an integer such that n^2 is not divisible by 3 then n is not divisible by 3.
- Prove by induction that if n is a positive integer then $6^n + 4$ is divisible by 5.
- Write the power set of $\{a, b, c\}$
- Prove or disprove the following statement: $\exists m \in \mathbb{Z}, \forall n \in \mathbb{Z}, : m \leq n$.