The **universal quantification** of predicate P(x) over domain U is the statement "P(x) for all values of x in the domain U" and is written $\forall x P(x)$ or $\forall x \in U \ P(x)$. When the domain is finite, universal quantification over the domain is equivalent to iterated *conjunction* (ands). The **existential quantification** of predicate P(x) over domain U is the statement "There exists an element x in the domain U such that P(x)" and is written $\exists x P(x)$ for $\exists x \in U \ P(x)$. When the domain is finite, existential quantification over the domain is equivalent to iterated disjunction (ors). An element for which P(x) = F is called a **counterexample** of $\forall x P(x)$. An element for which P(x) = T is called a **witness** of $\exists x P(x)$.