

QUIZ 4 FOR M325K

Name: _____
UT EID: _____

Test the following arguments for validity. Clearly identify the contradiction or give a model that is a counterexample.

$$(1) \left((\forall x (P(x) \Rightarrow Q(x))) \wedge (\exists x \neg Q(x)) \right) \Rightarrow (\exists x \neg P(x))$$

$$(2) \left((\forall x ((P(x) \wedge Q(x)) \Rightarrow R(x))) \wedge (\exists x P(x)) \wedge (\exists x Q(x)) \right) \Rightarrow (\exists x R(x))$$