

Discrete Math

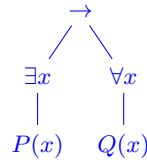
Quiz 8

Name: _____

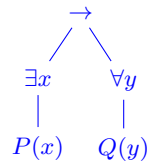
You have 10 minutes to complete this quiz. You may not use any unauthorized sources and you may not communicate with others about the exam. If you have a question raise your hand and remain seated. In order to receive full credit your answer must be **complete**, **legible** and **correct**. Show your work, and give adequate explanations.

1. (a) Draw a formula tree for

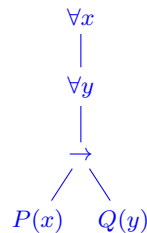
$$(\diamond) \quad (((\exists x)P(x)) \rightarrow ((\forall x)Q(x)))$$



(b) Standardize the variables apart in (\diamond) .



(c) Write (\diamond) in prenex form.



$$(\forall x)(\forall y)(P(x) \rightarrow Q(y))$$