# AMERICAN UNIVERSITY OF BEIRUT Faculty of Arts and Sciences - Mathematics Department Fall 2011-2012 <br> Checkpoint 1 

Name:

Translate the following into logical expressions by defining predicates and using quantifiers. Let the domain by all people.
a) There is no one in this class who can speak both French and Spanish.
b) Every student in this class has at least one friend who has taken this class.
c) It is necessary that a student in this class solves all recommended exercises to get a full grade in this checkpoint.

