Short Logic Quiz (2)

name:_____

[date]

max. 3 points

a) When are two or more open sentences logically equivalent?
[1pt – all or nothing]

b) EITHER Define what it is for a sentence of FOL to be a FO-validity OR (exclusive or – decide!) give an example of an argument that is logically valid, but whose conclusion is neither a tautological consequence nor an FO-consequence of its premises.
[1pt – all or nothing]

c) Pick the right option.
[1pt – all or nothing]

1. "$\forall x\,(Fx \rightarrow Gx)$" $\Leftrightarrow$ "$\neg\exists x\,(Fx \vee Gx)$"

☐ **True** ☐ **False**

2. "$\neg\exists x\,(Fx \rightarrow Gx)$" is ill-formed.

☐ **True** ☐ **False**

3. The replacement method's main purpose is to reveal a fact, if it is one, that may otherwise be hard to see. That fact is a) that a given argument is logically valid or b) that a given conclusion is not an FO-consequence of a given set of premises.

☐ **a** ☐ **b**