201 quiz

Prove by Contraposition:

* The negative of any irrational number is irrational

Suppose that *x* is any rational number. (Show that –*x* is also rational.)

*x* = *a*/*b* for some integers *a* and *b* with b ≠ 0 [*definition of rational*]

then -*x* = -(*a*/*b*) = (-*a*)/*b*

Since –*a* and *b* are both integers and *b* ≠ 0, -*x* is rational. *QED*.