(25) The proposed negation is incorrect. Consider the given statement: "The product of any irrational number and any rational number is irrational." For this to be false means that it is possible to find at least one product of an irrational and rational number that is rational. On the other hand the negation proposed in the exercise means that given any product of an irrational and rational number, it is rational. This is a much stronger statement than the actual negation: The truth of this statement implies the truth of the negation (assuming that there is at least one product of an irrational and rational number that rational), but the negation can be true without having this statement be true.

Correct negation: There is at least one product of an irrational and rational number that is rational.