Assignment 1: Software Testing

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1. See .hs file.
2. This property took a very long time to test by using **quickCheck**. I believe this has to do with the time it takes for the subsequences function to create all the possible sequences. See .hs file for the implementation.
3. For the same reasons as in q2, this test also took a long time to run. In this test we are testing the relation between the given equation and the amount of permutations a list can offer. See .hs file for the implementation.
4. See .hs file for implementation. This function can be tested by testing all of the sub-functions it is made of. This is also shown in the implementation.
5. This answer does not have to be tested since the "IsAPrime" function used in the implementation has already been proved to work correct in the book. Since the function uses "IsAPrime" to give a final answer, it must be correct. See .hs file for implementation.

6. Smallest counter-example is $2 * 3 = 6$. See .hs file for implementation.
7. See .hs file.
8. See .hs file