1. In the worse case, how many guesses would it our guessing game take to get the right answer if we had no hints at all? Explain.

   It would take 10 guesses in the worst-case scenario. Without any hint, the worst case would be that player missed all the previous guesses until the last possibility is the target number. Thus, player has 9 chances to miss the guess since there are 10 numbers. Then, player have the right answer in the 10^{th} guess.

2. In the worst case, how many guesses does it take to get the right number if we get a hint of "higher or lower" when guessing numbers 1-10 **and** guess intelligently (always picking in the middle of the remaining set of numbers)?

   The intelligent guess serves as a binary search. There are 10 numbers in total.
   Log2(10) = 3.32.
   Thus, 4 guesses at most.