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.

Answer: In worst case, if we had not hints, it will take 10 guesses to get the correct answer. For example, the number generated is 10, and your guess is 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10. 10 guesses required for worst case.

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)?
Hint: In your answer, show this mathematically with the log function.Links to an external site.

Answer: If there is hint, log2(10) guess is needed in worst case, because each time we are eliminating ½ of the candidate number, either lower part or higher part.