Quiz 4

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1. Consider the following statements. Judge whether each of them is true or false. You dont need to explain the reason.

   - Consider the output perturbation Algorithm 1 in Lecture 13. We must assume that the loss function ℓ is strongly convex.

   - In the Algorithm 2 of output perturbation in Lecture 13. The number of iterations T does not need be chosen carefully to achieve the small the error bound.

   - In the objective perturbation method Algorithm 1 in Lecture 14. In practice we can use any optimization method to solve the perturbed objective function and get some approximate solution. However, rigorously speaking this may be not (ϵ, δ) or ϵ-DP.

   - In the DP-SGD (Algorithm 3) in Lecture 15. The number of iterations T need be chosen carefully to achieve the small the error bound.