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$$P(X_{(100)} > 76) = 1 - P(X_{(100)} \leq 76) = 1 - \left(\Phi \left(\frac{76 - 70}{2} \right) \right)^{100}$$

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Question c) Page the Central Limit Theorem

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Question c) Page the Central Limit Theorem (e.g. page 386)

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Question c) Page the Central Limit Theorem (e.g. page 386) can be applied in case b). Limit theorems exists for maximum and minimum of random variables (extreme value distributions). These results depend on the specific form of the distribution of the individual X_i's. One can easily construct counterexamples to disprove the generality of a), like uniformly distributed X_i's.