1. 
(a) What does derandomization mean? 
(b) Why would one want to derandomize an algorithm? 
(c) On a high level, what is the method of conditional expectation?

2. 
(a) How large is the search space of the MAX-SAT problem? That is, how many possible solutions are there to an instance of MAX-SAT? 
(b) Does a large (i.e. non-polynomial) search space imply hardness? For example, if a decision problem has a search space of size $3^{(n/3)}$, is it NP-complete?

3. 
The book does not seem to discuss the hardness of MAX-SAT, but simply proceeds to give an approximation algorithm for it. How is this justified? In other words, prove MAX-SAT is NP-complete.

4. 
Give a (randomized) 0.984-approximation algorithm for the MAX-6-SAT problem (i.e. MAX-SAT, but each clause has exactly 6 literals).