Reading Quiz Ch 3.1-3.5

1) Choose all that apply. An algorithm's **complexity function**
   A) measures the algorithm's resource consumption
   B) can produce a negative value
   C) is defined with respect to the problem's instance size
   D) is defined with respect to the problem's solution size

2) The most useful measure of an algorithm's time complexity is
   A) the greatest amount of time it could possibly take to find a solution
   B) the average or most likely amount of time it will take to find a solution
   C) the least amount of time it could possibly take to find a solution

3) Running an algorithm on different instances of the same problem and recording the resource consumption of each run is
   A) part of deriving the algorithm's complexity via experimental analysis
   B) part of deriving the algorithm's complexity via mathematical analysis
   C) not part of a valid method for deriving an algorithm's complexity

4) Constants and extremely small input sizes can be ignored when analyzing an algorithm's complexity function.
   A) True
   B) False

5) Which of the following is true?
   A) O(n) and f(n) are both functions.
   B) O(n) = c * f(n)
   C) O(n) is a set of functions and f(n) is a single function.
   D) O(n) is a set of functions and f(n) is a set of functions with values smaller than O(n).