Which of the following are good examples of optimizing your code? Select all that apply.

Avoid excessive compiler calls. If you are searching for a value in an array, terminate the loop when the item is found.
There is nothing to be gained by repeatedly asking the question after you have gotten the answer you want.

Modularize this code into a function that is callable repeatedly and reuse the code when possible.
Wrapping the code into a function means that you can call it repeatedly in your code.

To optimize space complexity, you may opt for a solution that does in-place changes over creating a new data structure to house the result.
Some sorting algorithms like quicksort will move the data around a lot in coming to a final solution.

If there are portions of your code that are no longer required as a result of modularizing, or as a result of an avenue of thought that was not completed, remove it.
It is natural that redundant code creeps in during the process of solving the problem. It is ok to delete these unused code segments after you see that they are no longer needed.

Which of the following actions are important when an interview is conducted? Select all that apply.

Speak clearly and concisely. It is important to speak clearly and concisely to ensure you are understood by all parties.
Dress appropriately. First impressions are very important. A neatly dressed person creates an impression of respect.
Be on time for the interview. It leaves a good impression to be on time.

Consider that you have a lock with 7 different digits. Each digit can be a 1 or 0, how many potential pass numbers can you have for the lock?

128. A lock with 7 digits would have two to the power of seven and thus 128 different combinations.

Which of the type of memory is described in the following statements? This memory relates to external memory that can be plugged in externally and used to increase the storage capacity of your system. Accessing this type of memory is slower and requires transferring all required information and instructions into RAM.

Secondary memory relates to external memory that can be plugged in externally and used to increase the storage capacity of your system. Accessing this type of memory is slower and requires transferring all required information and instructions into RAM.

Given an array of numbers and a target value, using a loop what is the worst-case time complexity to check if the number is present in the array?

O(n). To determine if a value was there using a loop would mean checking every element in the array.

Given the following snippet of pseudocode:

```
array = [ ]
n = 4
FOR i = 0 TO n:
    FOR j = 0 TO n:
```

```
array.add(i*j)
```

What is the space complexity of this problem?

O(n^2). As n is looped through twice, the number of computations will reflect n*n or n^2.