1. Since the main vector has n elements, each of which is another vector with m integers, you would need to combine the complexities in a meaningful way. Since we know that m is always the floor of n/2, we can represent m in terms of n. Thus, a proper notation could be O(n). The equation could look something like n + n/2, where only the n would matter.
2. This time, we cannot express m in terms of n. The primary way with which we could represent the operation is with an equation like n + m, where it is unknown which value would be larger. In a case like this, every value still needs to be iterated through, so time still increases proportionately to the size of the vector and would still have an O(n) notation.
3. In this case, only the first sub vector is iterated through completely. Because of this, m is now a constant, and n dictates how much longer the operation continues after the initial time needed to iterate through the first subvector. The equation would look like n + m, where m is a constant, and the notation would be O(n).