Big-O complexities

addTriple:

The Big-O for this method is calculated to be linear. Since we are only adding players into the team, the complexity will only increase with the number of players added. Therefore, the Big-O is O(n).

removeTriple:

The Big-O for this method is cubic. Since we have a main loop at the start of the method and use two loops that are nested within this loop, the Big-O is O(n^3).

hasTriple:

The Big-O for this method is cubic. Since we have a main loop at the start of the method and call two other methods that are also using loops named hasSingle and hasPair, the Big-O is O(n^3).

Generalized Add/Remove:

The generalized add method is O(n) as you are simply adding to a list, the complexity is constant. The removeSingle(int z) method is O(n) as you are calling the method that traverses only once through the list. The removePair(int z) method is O(n^2) as we have a main loop and a loop nested within in the method that is called. In removeTriple(int z), the Big-O is the same as the private method which is O(n^3) and finally for removeQuartet(int d) we have O(n^4) as the method that is called has 4 nested loops.