Question 8

For this question, I used the brute force method using multiple for loops in order to iterate through the array and find possible addends. First, I created a templated class with a function that takes in anything as a type for a variable. The function takes in an array of any type, and the size of the array, and a variable s of any type that represents the sum we want to look for. We have two sets of for loops, first we have one to find a pair of addends, which requires two for loops. The first for loop will get a number, then the second for loop will traverse the rest of the array for another addend that meets the condition (the two add to the sum). Then the second set of for loops has three for loops to find three numbers who add to the sum we want. Each for loop has the same idea as the previous set, but the second loop holds a possible second value, and the last loop finds the correct last addend. In main, we ask the user to enter what size array they want, and to enter the sum they want to search for. We create an array of the desired size and add random numbers into each position of the array. Then we call the function, passing the proper parameters.