Problem 11-2

Use the technique of using a `HashMap` to perform rapid removal of duplicates from a `List` to solve the following problem:

Create a Java method

```
  boolean checkForSum(List<Integer> list, Integer z)
```

in a class `Schur`, which does the following: If there are two elements `x,y` in the list whose sum is `z`, return true; otherwise, return false.

Your implementation *may not use nested loops;* you should be able to obtain the correct return value by doing a single scan of the input list. See the Lesson 11 slides to see how this technique works in the case of removing duplicates.

Helpful Notes:

1. The statement above says that this condition must be met: x + y = z
   Using some simple math, we also know that this means:
   y = z – x.
2. The above statement means that the condition of x + y = z is true when you
   a. have value x in the list and also
   b. find z-x in the HashMap.
3. Each key and value pair in a HashMap Entry can be identical. For an Entry<Integer,Integer>, some number x can be inserted for both the key and the value.
4. Lesson 11 slides show how this will ensure that there will be no duplicates in the table – no duplicate keys and no duplicate values.
5. HashMap has the following method:
   ```
           public boolean containsKey(Object key)
   ```
   This method tells you whether a key is in the table or not.