

Solutions to Chapter 1 | Arrays and Strings

- 1.8** Assume you have a method `isSubstring` which checks if one word is a substring of another. Given two strings, `s1` and `s2`, write code to check if `s2` is a rotation of `s1` using only one call to `isSubstring` (i.e., “waterbottle” is a rotation of “erbottlewat”).

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SOLUTION

Just do the following checks

1. Check if `length(s1) == length(s2)`. If not, return false.
2. Else, concatenate `s1` with itself and see whether `s2` is substring of the result.

input: `s1 = apple, s2 = pleap` ==> apple is a substring of `pleappleap`

input: `s1 = apple, s2 = ppale` ==> apple is not a substring of `ppaleppale`

```
1 public static boolean isRotation(String s1, String s2) {
2     int len = s1.length();
3     /* check that s1 and s2 are equal length and not empty */
4     if (len == s2.length() && len > 0) {
5         /* concatenate s1 and s1 within new buffer */
6         String s1s1 = s1 + s1;
7         return isSubstring(s1s1, s2);
8     }
9     return false;
10 }
```