CREATIVE PROBLEM SOLVING

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1. **[FINGERS]** We have few persons standing in a straight line, numbered 1, 2, ... Persons at odd position (1, 3, ..) have the normal 10 fingers. The even position persons (2, 4, ..) we'll say have 11 fingers. Recursively return the number of "fingers" in the line 1, 2, ... n (without loops or multiplication).

```
int totalFingers(int n)
{
        // YOUR LOGIC HERE
}
```

INPUT	OUTPUT
totalFingers(0)	0
totalFingers(5)	52
totalFingers(12)	126
totalFingers(18)	189
totalFingers(50)	525

2. **[COUNT ME IN STRING]** Given a string, compute recursively (no loops) the number of times 'me' chars (together) in the string.

```
int countMe(char s[])
{
        // YOUR LOGIC HERE
}
```

INPUT	OUTPUT
countMe("Getting merit in metriculation")	2
countMe("Methyl Methane")	2
countMe("menthol Methyl Methane amenoacids")	4

countMe("beautiful")	0
countMe("themE")	1
countMe("methodoMe")	2
countMe("american creame is medium priced")	3

3. **[HAS SIXER]** Given an array of ints, compute recursively if the array contains a 6. We'll use the convention of considering only the part of the array that begins at the given index. In this way, a recursive call can pass index+1 to move down the array. The initial call will pass in index as 0.

```
bool hasSixer(int a[], int idx, int n)
{
        // YOUR LOGIC HERE
}
```

INPUT	OUTPUT
hasSixer({1, 6, 4}, 0, 3)	true
hasSixer({1, 4}, 1, 3)	false
hasSixer({6}, 0, 1)	true