

## Chapter 5 Programming 2

**5.41:** just made a for loop to fill each element to the fifth after that I made a big enhanced for loop to go through each element to see what pattern would work.

```
long []arr = new long[75];

for(int i = 1; i < arr.length; i++) {
    arr[i] = (long) Math.pow(i, 5);
}

for(int a = 1; a < arr.length; a++) {
    for(int b = a; b < arr.length; b++) {
        for(int c = b; c < arr.length; c++) {
            for(int d = c; d < arr.length; d++) {
                for(int e = d; e < arr.length; e++) {
                    for(int f = e; f < arr.length; f++) {
                        if(arr[a]+arr[b]+arr[c]+arr[d]+arr[e] == arr[f]) {
                            System.out.println("Good job! " + a + "^5 " + b + "^5 " + c + "^5 " + d + "^5 " + e + "^5 = " + f + "^5 ");
                        }
                    }
                }
            }
        }
    }
}
```

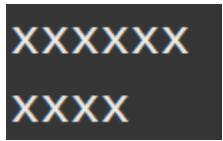
Answer

```
Good job! 19^5 43^5 46^5 47^5 67^5 = 72^5
```

**5.44:** checked the code given to me and found out the BigOh time was N it was linear for both methods.

```
System.out.println(makeLongString1(6));
System.out.println(makeLongString2(4));
//both linear looking through it once only. BigOh run time is N
}
//5.44
public static String makeLongString1( int N )
{
    String result = "";
    for( int i = 0; i < N; i++ )
        result += "x";
    return result;
}
public static String makeLongString2( int N )
{
    StringBuilder result = new StringBuilder( "" );
    for( int i = 0; i < N; i++ )
        result.append( "x" );
    return new String( result );
}
```

Answer



```
XXXXXX
XXXX
```