CS 2420
Fall semester section 01
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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 );
}
```

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Answer