Problem4_Polynominal

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Define the polynomial function described below.

$$p(x) = a_0 + a_1 x + a_2 x^2 + ... + a_n x^n = \sum_{i=0}^{n} a_i x^i$$

Show out put when $x = 1, 2, ..., 10$ when $n = 2$

In this exercise, all of coefficients is one, except for $a_0 = 11$ but you are supposed to write a general code. In other word, your function has to be used to any n not only for $n = 2$.

Sample Answer

```
pol <- function(x,n){
       s = 11
       for (i in 1:n) {
        s <- x**i + s
       }
       return(s)
      }
```

To get an out put we want to see,

```
for (i in 0:10){
     print(pol(i,2))
 }
```

```
## [1] 11
## [1] 13
## [1] 17
## [1] 23
## [1] 31
## [1] 41
## [1] 53
## [1] 67
## [1] 83
## [1] 101
## [1] 121
```

Every number is prime number. Is this a coincidence?