PLACEMENTS KEY'S

Coding Challenge #27 (Question)

Day - 14

Consider the following series: 1,1,2,3,4,9,8,27,16,81,32,243,64,729,128,2187…
Write a program to find the N^{th} term in the series.

This series is a mixture of 2 series - all the odd terms in this series form a geometric series and all the even terms form yet another geometric series.

Input Format:

The value N in a positive integer that should be read from STDIN.

Output Format:

The N^{th} term that is calculated by the program should be written to STDOUT. Other than value of nth term, no other character / string or message should be written to STDOUT.

Sample Input 0:

5

Sample Output 0:

4

Sample Input 1:

10

Sample Output 1:

81

PLACEMENTS KEY'S

Coding Challenge #27 (C Solution)

Day - 14

```
#include<stdio.h>
#include<math.h>
 int main()
{
  int n;  scanf("%d", &n);  if(n % 2 == 1)
  {
     int a = 1;  int r = 2;
     int term_in_series = (n+1)/2;
     int res = a * pow(2, term_in_series - 1);  printf("%d ", res);
  }
else
  {
     int a = 1;  int r = 3;
     int term_in_series = n/2;
     int res = a * pow(3, term_in_series - 1);
     printf("%d ", res);
          }
   return 0;
}
```

PLACEMENTS KEY'S

Coding Challenge #27 (JAVA Solution)

Day - 14

```
import java.util.*;
public class Main
{
        public static void main(String[] args)
        {
           Scanner sin = new Scanner(System.in);
            int n = sin.nextInt();
            System.out.println(n%2==0?(int)Math.pow(3,(n-1)/2):(int)Math.pow(2,(n-
            1)/2));
        }
}
```

PLACEMENTS KEY'S

Coding Challenge #28 (Question)

Day - 14

Program to find the area of a circle.

The input diameter will be given as an integer, the output area should be printed as a floating-point value with 2-point precision. No other extra information should be printed except the area value to the stdout. (Assume Pi = 3.14)

Sample Input 0:

6

Sample Output 0:

28.26

Sample Input 1:

20

Sample Output 1:

314

PLACEMENTS KEY'S

Coding Challenge #28 (C Solution)

Day - 14

```c
#include<stdio.h>
int main()
{
        int dia;
        float r, area;
         scanf("%d",&dia);
        r=(float)dia/2;
        area=3.14*r*r;
         printf("%0.2f",area);
        return 0;
}
```

PLACEMENTS KEY'S

Coding Challenge #28 (JAVA Solution)

Day - 14

```
import java.util.*;
import java.lang.*;
 class Main {
        public static void main (String[] args)
        {
                Scanner sc=new Scanner(System.in);
                int dia;
                 float r, area;  dia=sc.nextInt();
                  r=(float)dia/(float)2;
                 area=(float)3.14*r*r;
                 System.out.printf("%.2f",area);
            }
}
```