

Competitive Coding – Patterns & Series – Level 2

1. WAP to print following pattern

```
* * * *
```

```
  * * * *
```

```
    * * * *
```

```
      * * * *
```

2. WAP to print following pattern

Input: rows = 5, cols = 8

Output:

```
* * * * * * * *
```

```
*           *
```

```
*         *
```

```
*       *
```

```
* * * * * * * *
```

3. WAP to print the trapezoid pattern

If N = 2

```
1*2*5*6
```

```
  3*4
```

If N = 4

```
1*2*3*4*17*18*19*20
```

```
  5*6*7*14*15*16
```

```
    8*9*12*13
```

```
      10*11
```

If N = 5

1*2*3*4*5*26*27*28*29*30

6*7*8*9*22*23*24*25

10*11*12*19*20*21

13*14*17*18

15*16

4. WAP to print 2*N Number of rows for input pattern

3

44

555

6666

555

44

3

5. Find the nth term of the series 1,1,2,3,4,9,8,27,16,81,32,243,....

6. WAP to print the given H Pattern

Given an integer N, the task is to print the Alphabet H Pattern as given below:

Input: N = 3

Output:

1 3

2 2

3 2 1

2 2

1 3

7. WAP to print given Z pattern

Input: N = 5

Output:

1 2 3 4 5

4

3

2

1 2 3 4 5

7. WAP to print given N pattern

1 1

2 2 2

3 3 3

* * *

* * *

* * *

N N



8. Given an integer N as input, the task is to print the Magical Pattern as given below:

N..3 2 1 2 3..N

.....

3 3 3 3 2 1 2 3 3 3 3

2 2 2 2 2 1 2 2 2 2 2

1 1 1 1 1 1 1 1 1 1 1

2 2 2 2 2 1 2 2 2 2 2

3 3 3 3 2 1 2 3 3 3 3

.....

N..3 2 1 2 3..N

9. WAP to find nth term of the series 5, 2, 19, 13, 41, ...

Input: N = 4

Output:13

Input: N = 15

Output:272

10. WAP to find nth term of the series 1, 4, 15, 24, 45, 60, 91, 112, 153...

Input: n = 10

Output: 180

Input: n = 5

Output: 45

