

1)

```
1           1
1 2         2 1
1 2 3       3 2 1
1 2 3 4 4 3 2 1
```

sol:

----

```
class Test{
    public static void main(String[] args) {
        for(int i=1;i<5;i++) {
            for(int j=1;j<=i;j++) {
                System.out.print(j+" ");
            }
            for(int k=4;k>i;k--) {
                System.out.print(" "+" ");
            }
            for(int l=1;l<5-i;l++) {
                System.out.print(" "+" ");
            }
            for(int m=i;m>=1;m--) {
                System.out.print(m+" ");
            }
            System.out.println();
        }
    }
}
```

2)

```
* - - - *
- * - * -
- - 0 - -
- * - * -
* - - - *
```

sol:

----

```
class Test{
    public static void main(String[] args) {
        for(int i=1;i<6;i++) {
            for(int j=1;j<6;j++) {
                //System.out.print("*");
                if(i==3&&j==3) {
                    System.out.print(0);
                }
                else if(i==j||i+j==6){
                    System.out.print("*");
                }
            }
        }
    }
}
```

```

        }
        else {
            System.out.print("-");
        }
    }
    System.out.println();
}
}
}

```

3)

```

1
2 2
3 3 3
4 4 4 4

```

sol:

----

```

class A{
    public static void main(String[] args) {
        for(int i=1;i<5;i++) {
            for(int j=1;j<5-i;j++) {
                System.out.print(" "+" ");
            }
            for(int k=1;k<=i;k++) {
                System.out.print(i+" ");
            }
            System.out.println();
        }
    }
}

```

4)

```

4 4 4 4
3 3 3
2 2
1

```

sol:

----

```

class A{
    public static void main(String[] args) {
        for(int i=1;i<5;i++) {
            for(int j=1;j<i;j++) {
                System.out.print(" "+" ");
            }
            for(int k=1;k<=5-i;k++) {
                System.out.print(5-i+" ");
            }
        }
    }
}

```

```

    }
    System.out.println();
}
}

```

5)

```

      *
     * *
    * * *
   * * * *
  * * * *
 * * *
*

```

sol:  
-----

```

class A{
    public static void main(String[] args) {
        for(int i=1;i<5;i++) {
            for(int j=1;j<5-i;j++) {
                System.out.print(" "+" ");
            }
            for(int k=1;k<=i;k++) {
                System.out.print("*"+" ");
            }
            System.out.println();
        }
        for(int i=1;i<5;i++) {
            for(int j=1;j<=i;j++) {
                System.out.print(" "+" ");
            }
            for(int k=1;k<5-i;k++) {
                System.out.print("*"+" ");
            }
            System.out.println();
        }
    }
}

```

6)

```

      1
     1 2 1
    1 2 3 2 1
   1 2 3 4 3 2 1

```

sol:  
-----

```

class A{
    public static void main(String[] args) {

```

```

        for(int i=1;i<5;i++) {
            for(int j=1;j<5-i;j++) {
                System.out.print(" "+" ");
            }
            for(int k=1;k<=i;k++) {
                System.out.print(k+" ");
            }
            for(int l=i-1;l>=1;l--) {
                System.out.print(l+" ");
            }
            System.out.println();
        }
    }
}

```

7)

```

1 2 3 4 3 2 1
 1 2 3 2 1
   1 2 1
    1

```

sol:

----

```

public class Test {
    public static void main(String ar[]) {
        for (int i = 0; i < 4; i++) {
            for (int j = 0; j < i; j++) {
                System.out.print(" "+" ");
            }
            for (int k = 1; k <= 4 - i; k++) {
                System.out.print(k+" ");
            }
            for (int l = 4 - i - 1; l >= 1; l--) {
                System.out.print(l+" ");
            }
            System.out.println();
        }
    }
}

```

8)

```

2
3 5
7 11 13
17 19 23 29

```

sol:

----

```
import java.util.*;
```

```
class Test {
    public static void main(String[] ar) {
        int num=2;
        for (int k = 1; k < 5; k++) {
            for (int l = 1; l <= k; l++) {
                while (true) {
                    boolean isPrime = true;
                    for (int j = 2; j <= num / 2; j++) {
                        if (num % j == 0) {
                            isPrime = false;
                            // break;
                        }
                    }
                    if (isPrime == true) {
                        System.out.print(num + " ");
                        num++;
                        break;
                    }
                    num++;
                }
            }
            System.out.println();
        }
    }
}
9)
```

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

sol:

-----

```
class A{
    public static void main(String[] args) {
        for(int i=1;i<5;i++) {
            for(int j=1;j<5-i;j++) {
                System.out.print(" "+" ");
            }
            for(int k=1;k<=2*i-1;k++) {
                System.out.print("*"+" ");
            }
            System.out.println();
        }
        for(int i=1;i<5;i++) {
```

```

        for(int j=1;j<=i;j++) {
            System.out.print(" "+" ");
        }
        for(int k=1;k<8-2*i;k++) {
            System.out.print("*"+" ");
        }
        System.out.println();
    }
}

```

10)

```

      A
    A B A
  A B C B A
A B C D C B A

```

sol:  
-----

```

class Test {
    public static void main(String a[]) {
        int n = 4;
        for (int i = 1; i <= 4; i++) {
            for (int j = 0; j < n - i; j++) {
                System.out.print(" "+" ");
            }
            for (int k = 1; k <= i; k++) {
                System.out.print((char) (64 + k)+" ");
            }
            for (int l = i - 1; l >= 1; l--) {
                System.out.print((char) (64 + l)+" ");
            }
            System.out.println();
        }
    }
}

```

11)

```

  2
 4 6
8 10 12
14 16 18 20

```

sol:  
----

```

class A{
    public static void main(String[] args) {
        int count=2;
        for(int i=1;i<5;i++) {
            for(int j=1;j<=i;j++) {

```

```

        System.out.print(count+" ");
        count=count+2;
    }
    System.out.println();
}
}

```

12)

```

    *
    *
* * * * *
    *
    *

```

sol:  
-----

```

class Test{
    public static void main(String[] args) {
        for(int i=1;i<6;i++) {
            for (int j=1;j<6;j++) {
                //System.out.print("*");
                if(i==3||j==3) {
                    System.out.print("*"+" ");
                }
                else {
                    System.out.print(" "+" ");
                }
            }
            System.out.println();
        }
    }
}

```