[[[1]]]

```
public class Task1 {
        public static void main(String[] args) {
                System.out.println("First 100 pentagonal numbers : ");

                int count = 0 ;
                for(int number = 1 ; number <= 100 ; number++) {
                        System.out.printf("%-7d",getPentagonalNumber(number));
                        count++;
                        if(count % 10 == 0) {
                                System.out.println();
                        }
                }
        }
        public static int getPentagonalNumber(int num) {
                return num*(3*num - 1)/2 ;
        }
}
```

[[[2]]]

```
import java.util.Scanner ;
public class Task2 {
        public static void main(String[] args) {

                Scanner input = new Scanner (System.in);
                System.out.print("Enter number : ");
                int number = input.nextInt();

                System.out.print("Sum of digits for " +number+ " is "
+sumDigits(number));
        }
   public static int sumDigits (int n) {
           int sum = 0 ;
           while(n!=0) {
                   sum+= (n % 10) ;
                   n /= 10 ;
           }
           return sum ;
   }
}
```

[[[3]]]

```
import java.util.Scanner ;
public class Task3 {
        public static void main(String[] args) {

                Scanner input = new Scanner (System.in);
                System.out.print("Enter an integre to check palindrome : ");
                int number = input.nextInt();
                number = Math.abs(number);

                System.out.println(number+ " "+(isPalindrome(number)? "is
```

```
Palindrome" : "is not Palindrome"));
        }
        public static int reverse (int number) {
                int rev = 0 , rem = 0 ;
                while(number!=0) {
                        rem = number % 10 ;
                        rev = rev*10 + rem ;
                        number /= 10 ;
                }
                return rev ;
        }
        public static boolean isPalindrome (int number) {
                if(number == reverse(number))
                        return true ;
                return false ;
        }
}
[[[4]]]
import java.util.Scanner ;
public class Task4 {
        public static void main(String[] args) {

                Scanner input = new Scanner (System.in);
                System.out.print("Enter three numbers : ");
                double number1 = input.nextDouble();
                double number2 = input.nextDouble();
                double number3 = input.nextDouble();

                displaySortedNumbers(number1,number2,number3);
        }
        public static void displaySortedNumbers(double num1,double num2,double num3)
{
                if(num1 >num2 && num1 > num3) {
                        if(num2 > num3)
                                System.out.println("Sorted numbers : " +num1+ " "
+num2+ " " +num3);
                        else
                                System.out.println("Sorted numbers : " +num1+ " "
+num3+ " " +num2);
                }
                else if(num2 >num1 && num2 > num3) {
                        if(num1 > num3)
                                System.out.println("Sorted numbers : " +num2+ " "
+num1+ " " +num3);
                        else
                                System.out.println("Sorted numbers : " +num2+ " "
+num3+ " " +num1);
                }
                else {
                        if(num1 > num2)
```

```
                                System.out.println("Sorted numbers : " +num3+ " "
+num1+ " " +num2);
                        else
                                System.out.println("Sorted numbers : " +num3+ " "
+num2+ " " +num1);
                }
        }
}
[[[5]]]
import java.util.Scanner ;
public class Task5 {
        public static void main(String [] args) {

                Scanner input = new Scanner (System.in);
                System.out.print("Enter the amount invested : ");
                double amount = input.nextDouble();
                System.out.print("Enter annual interest rate : ");
                double rate = input.nextDouble();

                double total = 0 ;
                System.out.println("Years Future Value : ");
                for(int years = 1 ; years <= 30 ; years++) {
                        System.out.println(years+ "  "
+futureInvestmentValue(amount,rate/1200,years));
                }// monthly rate = ( annual rate / 12 * 100.0)
        }
        public static double futureInvestmentValue(double investmentAmount ,double
monthlyInterestRate, int years) {
                return investmentAmount*(Math.pow((1 +
monthlyInterestRate),(years*12)));
        }
}
[[[6]]]
import java.util.Scanner ;
public class Task6 {
        public static void main(String[] args) {

                Scanner input = new Scanner (System.in);
                System.out.print("Enter n : ");
                int n = input.nextInt();

                printMatrix(n);
        }
        public static void printMatrix (int n) {
                for(int row = 1 ; row <= n ; row++) {
                        for(int col = 1 ; col <=n ; col++) {

                                System.out.printf("%3d",(int)(Math.random()*2));
                        }
                        System.out.println();
```

```
                }
        }
}
[[[7]]]
import java.util.Scanner ;
public class Task7 {
        public static void main(String [] args) {

                Scanner input = new Scanner (System.in);
                System.out.print("Enter three sides of triangle : ");
                double a = input.nextDouble();
                double b = input.nextDouble();
                double c = input.nextDouble();

                if(!isValid(a,b,c)) {
                        System.out.println("Wrong input.");
                        System.exit(1);
                }
                System.out.println("Area of the triangle : " +area(a,b,c));
        }

        public static boolean isValid(double side1, double side2, double side3) {
                if(side1 + side2 > side3 && side1 + side3 > side2 && side2 + side3 >
side1) {
                        return true ;
                }
                return false ;
        }

        public static double area (double side1, double side2, double side3) {
                double s = side1 + side2 + side3 ;
                double area = Math.sqrt(s*(s-side1)*(s-side2)*(s-side3));
                return area ;
        }
}
[[[8]]]
import java.util.Scanner ;
public class Task8 {
        public static void main(String[] args) {

        Scanner input = new Scanner (System.in);
        System.out.print("Enter milliseconds : ");
        long millisecond = input.nextLong();

        System.out.println("Hours : Minutes : Seconds : "
+convertMillis(millisecond));
        }

        public static String convertMillis (long millis) {
                String time  = "" ;
```

```
                long second = millis / 1000 ;
                long minute = second / 60 ;
                long remSec = second % 60 ;
                long remMin = minute % 60 ;
                long hour = minute / 60 ;

                time = hour + " : " + remMin + " : " + remSec;
                return time ;
        }
}
[[[9]]]
import java.util.Scanner ;
public class Task9 {
        public static void main(String[] args) {

                Scanner input = new Scanner (System.in);
                System.out.print("Enter the number of sides : ");
                int num = input.nextInt();
                System.out.print("Enter the side : ");
                double side = input.nextDouble();

                System.out.println("The area of the pentagon : " +area(num,side));

        }
        public static double area (int n, double side) {
                return (n*side*side)/(4*Math.tan(Math.PI/n)) ;
    }
}
```