[[[1]]] //Real root

```
import java.util.Scanner ;
public class Task1 {
	public static void main (String[] args) {

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

		double discriminant = ((b*b) - (4*a*c)) ;

		if(discriminant > 0) {
			double r1 = (-b + Math.sqrt(discriminant))/(2*a);
			double r2 = (-b - Math.sqrt(discriminant))/(2*a);
			System.out.println("Root 1 : " +r1+ "\nRoot 2 : "+r2);
		}
		else if (discriminant < 0) {
			System.out.println("There is no real root.");
		}
		else
			System.out.println("Root : " +(-b/(2*a)));
	}
}
```

[[[2]]] //Month

```
public class Task2 {
	public static void main(String[] args) {

		int month  = (int) (Math.random()*12)+1 ;
		switch(month) {
		case 1  : System.out.println("January"); break ;
		case 2  : System.out.println("February"); break ;
		case 3  : System.out.println("March"); break ;
		case 4  : System.out.println("April"); break ;
		case 5  : System.out.println("May"); break ;
		case 6  : System.out.println("June"); break ;
		case 7  : System.out.println("July"); break ;
		case 8  : System.out.println("August"); break ;
		case 9  : System.out.println("September"); break ;
		case 10 : System.out.println("October"); break ;
		case 11 : System.out.println("November"); break ;
		default : System.out.println("December");
	}
    }
}
```

[[[3]]] // Day name

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

        Scanner input = new Scanner(System.in);

        System.out.printf("Enter todays date: ");
        int date = input.nextInt();
        System.out.print("Enter the number of days elapsed since today: ");
        int elapsed = input.nextInt();

        int future_date = (date + elapsed) % 7;
        String day_of_week = "";

        switch(date){
            case 0: day_of_week = "Sunday";
                    break;
            case 1: day_of_week = "Monday";
                    break;
            case 2: day_of_week = "Tuesday";
                    break;
            case 3: day_of_week = "Wednesday";
                    break;
            case 4: day_of_week = "Thursday";
                   break;
            case 5: day_of_week = "Friday";
                    break;
            case 6: day_of_week = "Saturday";
                    break;
        }

        if (future_date == 0)
            System.out.printf("Todays is %s and the future day is Sunday",
day_of_week);
        else if(future_date == 1)
            System.out.printf("Todays is %s and the future day is Monday",
day_of_week);
        else if(future_date == 2)
            System.out.printf("Todays is %s and the future day is Tuesday",
day_of_week);
        else if(future_date == 3)
            System.out.printf("Todays is %s and the future day is Wednesday",
day_of_week);
        else if(future_date == 4)
            System.out.printf("Todays is %s and the future day is Thursday",
day_of_week);
        else if(future_date == 5)
            System.out.printf("Todays is %s and the future day is Friday",
```

```
day_of_week);
        else if(future_date == 6)
            System.out.printf("Todays is %s and the future day is Saturday",
day_of_week);
    }
}
```

[[[4]]] //Palindrome

```
import java.util.Scanner ;
public class Task4 {
        public static void main(String[] args) {

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

                int temp = number ;
                int remainder = 0 , reverse = 0 ;
                while(temp!=0) {
                        remainder = temp % 10 ;
                        reverse = reverse * 10 + remainder ;
                        temp /= 10 ;
                }
                if(reverse == number)
                        System.out.println(number+" is palindrome");
                else
                        System.out.println(number+" is not palindrome");
        }
}
```

[[[5]]] //Rock scissor paper

```
import java.util.Scanner;
public class Task5 {
        public static void main(String[] args) {

                Scanner input = new Scanner(System.in);
                int computer = (int)(Math.random() * 3);

                System.out.print("scissor (0), rock (1), paper (2): ");
                int user = input.nextInt();
                if(user < 0 || user > 2)
                        System.exit(1) ;

                System.out.print("The computer is ");
                switch (computer) {
                        case 0: System.out.print("scissor."); break;
                        case 1: System.out.print("rock."); break;
                        case 2: System.out.print("paper.");
                }
```

```
                System.out.print(" You are ");
                switch (user) {
                        case 0: System.out.print("scissor"); break;
                        case 1: System.out.print("rock"); break;
                        case 2: System.out.print("paper ");
                }

                if (computer == user)
                        System.out.println(" too. It is a draw");
                else {
                        boolean win = (user == 0 && computer == 2) || (user == 1 &&
computer == 0) || (user == 2 && computer == 1);
                        if (win)
                                System.out.println(". You won");
                        else
                                System.out.println(". You lose");
                }
        }
}
[[[6]]] //Area of triangle

import java.util.Scanner;
public class Task6 {
        public static void main(String[] args) {
                Scanner input = new Scanner(System.in);

                System.out.println("Enter three edges for a triangle:");
                System.out.print(" Edge 1 points x, y: ");
                double x1 = input.nextDouble();
                double y1 = input.nextDouble();
                System.out.print(" Edge 2 points x, y: ");
                double x2 = input.nextDouble();
                double y2 = input.nextDouble();
                System.out.print(" Edge 3 points x, y: ");
                double x3 = input.nextDouble();
                double y3 = input.nextDouble();

                boolean valid = (x1 + y1 > x3 + y3 && x2 + y2 > x3 + y3) ||
                                                        (x1 + y1 > x2 + y2 && x3 +
y3 > x2 + y2) ||
                                                        (x3 + y3 > x1 + y1 && x2 +
y2 > x1 + y1);

                if (!valid) {
                        System.out.println("Input is invalid.");
                        System.exit(1);
                }
                double side1 = Math.pow(Math.pow(x2 - x1, 2) + Math.pow(y2 - y1, 2),
0.5);
                double side2 = Math.pow(Math.pow(x3 - x2, 2) + Math.pow(y3 - y2, 2),
```

```
0.5);
                double side3 = Math.pow(Math.pow(x1 - x3, 2) + Math.pow(y1 - y3, 2),
0.5);

                System.out.println("perimeter of triangle is " + (side1 + side2 +
side3));
        }
}
```

[[[7]]] //Sum Average

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

                Scanner input = new Scanner (System.in);
                int sum = 0 , count = 0 , number ;
                double average = 0 ;

                System.out.print("Enter number : ");
                do {
                    number = input.nextInt();
                        sum+= number ;
                        count++ ;
                }while(number!=0) ;

                average = (double)sum / (count-1);
                System.out.println("Sum : " +sum+ "\nAverage : " +average);
        }
}
```

[[[8]]] //Kg Pound

```
public class Task8 {
        public static void main(String[] args) {

                System.out.printf("%10s  %8s  |  %8s  %10s\n",
"Kilograms","Pounds","Pounds","Kilograms");

                int pound = 20 ;
                for( int i = 1 ; i < 200 ; i+=2 ) {
                    System.out.printf("% -10d  %8.1f  |  %-8d  %10.2f\n", i, i*2.2,
pound, pound*0.4545);
                    pound += 5 ;
                }
        }
}
```

[[[9]]] //Score

```
import java.util.Scanner ;
public class Task9 {
        public static void main(String[] args) {
```

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

                double score = 0 , secondHighest = 0 , highest = 0 ;
                String name = "" , student1 = "", student2 = "";

                for ( int i = 1 ; i <= studentNo ; i++) {
                    System.out.printf("Enter student %d name & score : ",i);
                    name = input.next();
                    score = input.nextDouble();

                    if( i == 1 ) {
                        highest = score ;
                        student1 = name ;
                    }
                    else if ( i == 2 ) {
                        if( score > highest ) {
                        secondHighest = highest ;
                        highest = score ;
                        student2 = student1 ;
                        student1 = name ;
                        }
                        else {
                            secondHighest = score ;
                            student2 = name ;
                        }
                      }
                     else if ( i > 2 && score > secondHighest ) {
                          if ( score > highest ) {
                              secondHighest = highest ;
                              highest = score ;
                              student2 = student1 ;
                              student1 = name ;
                          }
                     else {
                              secondHighest = score ;
                              student2 = name ;
                          }
                      }
            }
                 System.out.println("\nHighest score : "+highest+"\nName :
"+student1+"\nSecond highest score"+secondHighest+"\nName : "+student2);
        }
}
```