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

      int num=Integer.parseInt(args[0]);

      for(int i=1;i<=num;i++ )
      {
         if(num%i== 0)
         {
           System.out.println(i);
         }
      }
  }
}
```

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

    String str=args[0];
    String reverse="";
    char middle;
    int leng=str.length();
    if(leng%2==0)
    {
    middle= str.charAt(leng/2-1);
    }
    else
    {
    middle= str.charAt(leng/2);
    }
    for (int i=leng-1; i>=0;i--)
    {
     reverse+=str.charAt(i);
    }
    System.out.println(reverse);
    System.out.println("The middle character is "+middle);
    }
}
```

```
import java.util.Random;

public class InOrder {

    public static void main(String[] args) {
        Random random=new Random();
        int rnd1=random.nextInt(10);
        System.out.println(rnd1);
        boolean ok=true;
        while (ok)
        {
            int rnd2=random.nextInt(10);
            if(rnd2>rnd1)
            {
             System.out.println(rnd2);
             rnd1=rnd2;

            }
            else
            {
             ok=false;
            }
        }
    }
}
```

```
public class DamkaBoard {

    public static void main(String[] args) {

        int N=Integer.parseInt(args[0]);

        for(int i=1;i<=N;i++)
        {
          for(int b=1;b<=N;b++)
          {
           if (i%2==0)
           {
            System.out.print(" *");
           }
           else
           {
            System.out.print("* ");
           }
          }
          System.out.println();
        }
    }
}
```

```
public class Perfect {

    public static void main(String[] args) {

     int N=Integer.parseInt(args[0]);
     String str=N+" is a perfect number since "+N+" = "+1;
     int sum=1;
     for(int i=2;i<N;i++)
     {
       if(N%i==0)
       {
        str+=" + "+i;
        sum+=i;
       }
     }
     if(sum==N)
     {
        System.out.println(str);

     }
     else
     {
       System.out.println(N+" is not a perfect number");
     }

    }
}
```

```
import java.util.Random;

public class OneOfEachStats {

    public static void main(String[] args) {

        int N=Integer.parseInt(args[0]);
        int count2=0;
        int count3=0;
        int count4=0;
        int countAllChild=0;
        double average;
        int seed=Integer.parseInt(args[1]);
        Random rnd=new Random(seed);

        for(int i=0;i<N;i++)
        {
            boolean girl=false;
            boolean boy=false;

            int count=0;
            while(!girl||!boy)
            {
             double child=rnd.nextDouble();
             count++;
            if(child<0.5) //boy
            {

                boy=true;
            }
```

```
            else //girl
            {

               girl=true;
            }
            }

            countAllChild+=count;
            if(count==3){count3++;}
            else if(count>=4){count4++;}
            else {count2++;}

        }
        average= (double)countAllChild/N;
        System.out.println("Average: "+average+" children to get at least one of each
gender.");
        System.out.println("Number of families with 2 children: "+count2);
        System.out.println("Number of families with 3 children: "+count3);
        System.out.println("Number of families with 4 or more children: "+count4);
        if(count2>count3&&count2>count4)
        {

         System.out.println("The most common number of children is 2.");



        }
        else if(count3>count2 && count3>count4)
        {
         System.out.println("The most common number of children is 3.");
        }
        else
```

```
        {
         System.out.println("The most common number of children is 4 or more.");
        }
    }
}
```