```
public class Divisors {
   public static void main(String[] args)
    {
      int x =  Integer.parseInt(args [0]);
      for (int i=1; i<=x; i++)
      {
        if (x%i==0)
          System.out.println(i);
      }
   }
}
```

```
public class Reverse {
      public static void main (String[] args){
            String s = args[0];
            int length = s.length();
            int middle = length/2;
            String rev = "";
            int i = length;
            while (i!=0)
                  {
                        char c = s.charAt(i-1);
                        rev = rev + c;
                        i--;
                  }
            System.out.println(rev);
            System.out.println("The middle character is " +
rev.charAt(middle));


      }
}
```

```
public class InOrder {
	public static void main (String[] args) {
		int rand1 = (int) (Math.random()*10);
		System.out.println (rand1);
		int rand2 = (int) (Math.random()*10);
		while (rand2 >= rand1)
		{
			System.out.println (rand2);
			rand1=rand2;
			rand2=(int)(Math.random()*10);
		}
	}
}
```

```
public class Perfect {
     public static void main (String[] args) {
          int num =  Integer.parseInt(args [0]);
          int sum= 1;
          String answer = num +" is a perfect number since "+ num +" =
1" ;
          for (int i=2;i<num;i++)
          {
               if(num%i==0)
               {
                    sum = sum+i;
                    answer = answer+ " + " +i;
               }
          }
          if (num==sum)
          {
           System.out.println(answer);
          }
          else
          {
               System.out.println(num+ " is not a perfect number");
          }



     }
}
```

```
public class DamkaBoard {
	public static void main(String[] args) {
		int num =  Integer.parseInt(args [0]);
		for (int i=0; i<num;i++)
		{
			if (i%2==0)
			{
				System.out.print("*");
			}
			for(int j=0; j<num-1;j++)
			{
				System.out.print(" *");
			}
				if (i%2==1)
				{
					System.out.print(" *");
				}
				else
				{
					System.out.print(" ");
				}
			System.out.println();

		}
	}
}
```

```
public class OneOfEach {
	public static void main (String[] args) {
		boolean isGirl = false;
		boolean isBoy = false;
		int count = 0;
		while(isGirl==false || isBoy==false)
		{
			int rand= (int)(Math.random()+0.5);
			if (rand==1)
			{
				isGirl=true;
			}
			else
			{
				isBoy=true;
			}
			count++;
		}
		System.out.println("You made it... and you now have "+ count
+" children.");
	}
}
```

```
public class OneOfEachStats1 {
	public static void main (String[] args) {
		int t = Integer.parseInt(args [0]);
		double avg = 0.0;
		int count2 = 0;
		int count3 = 0;
		int count4 = 0;
		int mode = 0;
		for (int j=0;j<t;j++)
		{
			boolean isGirl = false;
			boolean isBoy = false;
			int count = 0;
			while(isGirl==false || isBoy==false)
				{
					double rand= Math.random();
					if (rand<0.5)
						{
							isGirl=true;
						}
					else
						{
							isBoy=true;
						}
					count++;
				}
			avg+=count;
			if (count==2)
			{
				count2++;
			}
			else
				{
					if(count==3)
					{
						count3++;
					}
					else
					{
						count4++;
					}
				}

		}
		avg = avg/t;
		mode=Math.max(count2, Math.max(count3,count4));
```

```
          System.out.println("Average: "+avg+" 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 (mode==count2)
          {
               System.out.println("The most common number of children
is 2.");
          }
          else
               {
               if (mode==count3)
                    {
                    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.");
                    }
               }

          }
}
```

```
import java.util.Random;
public class OneOfEachStats {
	public static void main (String[] args) {
		int T = Integer.parseInt(args[0]);
		int seed = Integer.parseInt(args[1]);
		Random generator = new Random(seed);
		double avg = 0.0;
		int count2 = 0;
		int count3 = 0;
		int count4 = 0;
		int mode = 0;
		for (int j=0;j<T;j++)
		{
			boolean isGirl = false;
			boolean isBoy = false;
			int count = 0;
			while(isGirl==false || isBoy==false)
				{
					double rand = generator.nextDouble();
					if (rand<0.5)
						{
							isGirl=true;
						}
					else
						{
							isBoy=true;
						}
					count++;
				}
			avg+=count;
			if (count==2)
			{
				count2++;
			}
			else
				{
					if(count==3)
					{
						count3++;
					}
					else
					{
						count4++;
					}
				}
```

```
            }
            avg = avg/T;
            mode=Math.max(count2, Math.max(count3,count4));
            System.out.println("Average: "+avg+" 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 (mode==count2)
            {
                  System.out.println("The most common number of children
is 2.");
            }
            else
                  {
                  if (mode==count3)
                        {
                        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.");
                        }
                  }


      }
}
```