```
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 word = args[0];
		if (args.length == 0)
		{
			System.out.println("Please provide a word.");
		}
		int mid = 0;
		for (int i = word.length() - 1; i >= 0; i-- )
		{
			System.out.print(word.charAt(i));
		}

		System.out.println();
		int middle = word.length()/2;
		if (word.length()%2 == 0)
		{
			middle --;
		}
		System.out.println("The middle character is " + word.charAt(middle));
	}
}
```

```
public class InOrder
{
	public static void main (String[] args)
	{
		int num1 = (int)(10.0 * Math.random());
		int max = num1;
		do
		{
			System.out.print(num1 + " ");
			num1 = (int)(10.0 * Math.random());
			if (num1 >= max)
			{
				max = num1;
			}
		}
		while (num1 >= max);

	}
}
```

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

	}
}
```

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

```
import java.util.Random;

public class OneOfEachStats
{
	public static void main (String[] args)
	{
		int num = Integer.parseInt(args[0]);
		int seed = Integer.parseInt(args[1]);
		 Random generator = new Random(seed);
		boolean sucsess = false;
		boolean girl = false; // smaller than 0.5
		boolean boy = false; // bigger than 0.5
		int countchild = 0;
		int countfam = 0;
		double rnd = 0;
		int fam2 = 0;
		int fam3 = 0;
		int fam4 = 0;
		int max = 2;
		for (int i = 1; i <= num; i ++)
		{
			while (sucsess == false)
		   {
			  if ((girl && boy) == true)
			  {
				break;
			  }
			  rnd = generator.nextDouble();;
			  if (rnd <= 0.5)
			  {
				girl = true;
				countchild ++;
			  }
			  else
			  {
				boy = true;
				countchild ++;
			  }
			  if ((girl && boy) == true)
			  {
			    sucsess = true;
			    countfam += countchild;
			    if (countchild == 2)
			    {
				fam2++;
			    }
			    else if (countchild == 3)
			    {
				fam3++;
			    }
			    else fam4++;
			  }
```

```
                }
                girl = false;
                boy = false;
                sucsess = false;
                countchild = 0;

            }
            if((fam2 >= fam3) && (fam2 >= fam4))
            {
                    max=2;
            }
            else if((fam3 > fam2) && (fam3 > fam4))
            {
                    max=3;
            }
            else
            {
                    max=4;
            }
            double avg = ((double) countfam) / num;
            System.out.println("Average: " + avg + " children to get at least one of each
gender.");
            System.out.println("Number of families with 2 children: " + fam2);
            System.out.println("Number of families with 3 children: " + fam3);
            System.out.println("Number of families with 4 or more children: " + fam4);
            System.out.println("The most common number of children is " + max +".");
        }
}
```