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

```
public class Reverse {
        public static void main (String[] args){
        String text = args[0] ;
        // length of text
        int l = text.length() ;
   for (int i = (l-1); i >= 0; i-- ){
        System.out.print(text.charAt(i));
   }
   System.out.println();
        // the middle chr
        int mid = l / 2 ;
        if ( l % 2 == 0){
                mid = mid - 1;
        }
        // print the mid char
   System.out.println("The middle character is " + text.charAt(mid));
        }
}
```

```
public class InOrder {
	public static void main (String[] args) {
		// the first rendom integer
		int a = (int) (Math.random() * 10);
		int b = (int) (Math.random() * 10);
		System.out.print(a + " ");
		// loop, as long as b is >= a than it will continue to generate and print
randoms.
		while (b >= a) {
			System.out.print(b + " ");
			a = b;
			b = (int) ( Math.random() * 10);
		}
	}
}
```

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

         }
 }
```

```
public class DamkaBoard {
	public static void main(String[] args) {
		// a = number 0f line
		int a = Integer.parseInt( args [0]);
		for ( int b = 1 ; b <= a ; b++ ){
			if ( b % 2 == 0){
			System.out.println( " *".repeat(a));
		} else {System.out.println( "* ".repeat(a));
		}
		}
	}
}
```

```
public class OneOfEach {
	public static void main (String[] args) {
		//sumb number of boys, sumg number of g
		int sumb = 0;
		int sumg = 0;
		String k = "";
		//until i have at list one b and one g the loop will continu
		while ( sumb < 1 || sumg <1 ){
			double a =  Math.random();
	if ( a >= 0.5){
			 sumb++;
			 k += " b ";
		}
		else {
			sumg++;
			k += " g ";
		}
		a = Math.random();
		}

	System.out.println( k );
   int sum = sumb + sumg;
	System.out.println( "You made it... and you now have " + sum + " children.");

	}
}
```

```
public class OneOfEachStats1 {
    public static void main(String[] args) {
        int t = Integer.parseInt(args[0]);
        // number of familys with 2 k
        int k2 = 0;
        // number of familys with 3k
        int k3 = 0;
        // number of familys with 4k
        int k4 = 0;
        // most com familys
        int ck = 0;
        // in case of ck=4
        String ormore = "";
        // sum k of all familys
        double sumt = 0;
        // avg family
        double avg = 0;
// loop until i = t
        for (int i = 1; i <= t; i++) {
            int sumb = 0;
            int sumg = 0;

// until I have at least one "b" and one "g" and the total count is less than or equal to t
            while ((sumb < 1 || sumg < 1) && (sumb + sumg <= t)) {
                double a = Math.random();
                if (a >= 0.5) {
                    sumb++;
                } else {
                    sumg++;
                }
            }

            int sum = sumb + sumg;
            sumt += sum;

            if (sum == 2) {
                k2++;
            } else if (sum == 3) {
                k3++;
            } else {
                k4++;
            }
// define ck as the right family
            if ( k2 >= k3 && k2 >= k4 ) {
                ck = 2;
            } else if( k3 >= k4 ){
                ck = 3;
```

```
            } else {
                ck = 4 ;
                ormore = " or more";
            }

        }

        avg = sumt / t;

        System.out.println("Average: " + avg + " children to get at least one of each gender.");
        System.out.println("Number of families with 2 children: " + k2);
        System.out.println("Number of families with 3 children: " + k3);
        System.out.println("Number of families with 4 or more children: " + k4);
        System.out.println("The most common number of children is " + ck + ormore + ".");
    }
}
```

```
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);
        // number of familys with 2 k
        int k2 = 0;
        // number of familys with 3k
        int k3 = 0;
        // number of familys with 4k
        int k4 = 0;
        // most com familys
        int ck = 0;
        // in case of ck=4
        String ormore = "";
        // sum k of all familys
        double sumt = 0;
        // avg family
        double avg = 0;
// loop until i = t
        for (int i = 1; i <= T; i++) {
            int sumb = 0;
            int sumg = 0;

// until I have at least one "b" and one "g" and the total count is less than or equal to t
            while ((sumb < 1 || sumg < 1) && (sumb + sumg <= T)) {
                double a = generator.nextDouble();
                if (a >= 0.5) {
                    sumb++;
                } else {
                    sumg++;
                }
            }

            int sum = sumb + sumg;
            sumt += sum;

            if (sum == 2) {
                k2++;
            } else if (sum == 3) {
                k3++;
            } else {
                k4++;
            }
```

```
// define ck as the right family
          if ( k2 >= k3 && k2 >= k4 ) {
             ck = 2;
          } else if( k3 >= k4 ){
             ck = 3;
             } else {
              ck = 4 ;
             }

       }

       avg = sumt / T;

       System.out.println("Average: " + avg + " children to get at least one of each gender.");
       System.out.println("Number of families with 2 children: " + k2);
       System.out.println("Number of families with 3 children: " + k3);
       System.out.println("Number of families with 4 or more children: " + k4);
       System.out.println("The most common number of children is " + ck + ormore + ".");
   }
}
```