

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

```
public class Reverse {  
    public static void main (String[] args) {  
        String givenArg = args[0];  
        int stringLength = givenArg.length();  
        String newString = "";  
        for(int i = (stringLength - 1); i >= 0; i--) {  
            newString = newString + givenArg.charAt(i);  
        }  
        System.out.println(newString);  
        int halfLength = newString.length() / 2;  
        char middleChar = newString.charAt(halfLength);  
        System.out.println("The middle character is " + middleChar);  
    }  
}
```

```
public class InOrder {  
    public static void main (String[] args) {  
        int randomNum1 = (int)(Math.random() * 10);  
        int randomNum2;  
        do {  
            System.out.print(randomNum1 + " ");  
            randomNum2 = randomNum1;  
            randomNum1 = (int)(Math.random() * 10);  
        }  
        while (randomNum1 >= randomNum2);  
    }  
}
```

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

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

```

public class OneOfEach {
    public static void main (String[] args) {
        double randomChance = Math.random();
        int childrenCount = 0;
        boolean girl = false;
        boolean boy = false;

        do {
            if(randomChance < 0.5) {
                girl = true;
                System.out.print("g ");
            } else {
                boy = true;
                System.out.print("b ");
            }
            randomChance = Math.random();
            childrenCount = childrenCount + 1;
        }
        while(!(girl && boy));

        System.out.println("");
        System.out.print("You made it... and you now have " + childrenCount
            + " children.");
    }
}

```

```

public class OneOfEachStats1 {
    public static void main (String[] args) {
        int T = Integer.parseInt(args[0]);
        double randomChance = Math.random();
        int childrenCount = 0;
        double finalChildrenNum = 0;
        boolean girl = false;
        boolean boy = false;

        int twoChildren = 0;
        int threeChildren = 0;
        int fourChildren = 0;

        for(int i = 0; i < T; i++) {
            do {
                if(randomChance < 0.5) {
                    girl = true;
                } else {
                    boy = true;
                }
                randomChance = Math.random();
                childrenCount = childrenCount + 1;
            }
            while(!(girl && boy));

            if(childrenCount == 2) {
                twoChildren = twoChildren + 1;
            } else if(childrenCount == 3) {
                threeChildren = threeChildren + 1;
            } else if(childrenCount >= 4) {

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        fourChildren = fourChildren + 1;
    }
    finalChildrenNum = finalChildrenNum + childrenCount;
    childrenCount = 0;
    girl = false;
    boy = false;
}

double averageChildrenNum = finalChildrenNum / T;

System.out.println("Average: " + averageChildrenNum + " children to get at
least one of each gender.");

System.out.println("Number of families with 2 children: " + twoChildren);
System.out.println("Number of families with 3 children: " + threeChildren);
System.out.println("Number of families with 4 or more children: " +
fourChildren);

if(twoChildren >= threeChildren) {
    if(twoChildren >= fourChildren) {
        System.out.println("The most common number of children is 2.");
    } else {
        System.out.println("The most common number of children is 4 or
more.");
    }
} else {
    if(threeChildren >= fourChildren) {
        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 randomChance = generator.nextDouble();
        int childrenCount = 0;
        double finalChildrenNum = 0;
        boolean girl = false;
        boolean boy = false;

        int twoChildren = 0;
        int threeChildren = 0;
        int fourChildren = 0;

        for(int i = 0; i < T; i++) {
            do {
                if(randomChance < 0.5) {
                    girl = true;
                } else {
                    boy = true;
                }
                randomChance = generator.nextDouble();
                childrenCount = childrenCount + 1;
            }
            while(!(girl && boy));
        }
    }
}
```

```

if(childrenCount == 2) {
    twoChildren = twoChildren + 1;
} else if(childrenCount == 3) {
    threeChildren = threeChildren + 1;
} else if(childrenCount >= 4) {
    fourChildren = fourChildren + 1;
}
finalChildrenNum = finalChildrenNum + childrenCount;
childrenCount = 0;
girl = false;
boy = false;
}

double averageChildrenNum = finalChildrenNum / T;

System.out.println("Average: " + averageChildrenNum + " children to get at least
one of each gender.");

System.out.println("Number of families with 2 children: " + twoChildren);
System.out.println("Number of families with 3 children: " + threeChildren);
System.out.println("Number of families with 4 or more children: " +
fourChildren);

if(twoChildren >= threeChildren) {
    if(twoChildren >= fourChildren) {
        System.out.println("The most common number of children is 2.");
    } else {
        System.out.println("The most common number of children is 4 or more.");
    }
} else {
    if(threeChildren >= fourChildren) {
        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.");
    }
}

```

}

}

}

}