

課題 0201 Sum1toXwhile

```
package j1.remedial02;

public class Sum1toXwhile {
    public static void main(String[] args) {
        int sum = 0;
        int i=0;
        while(sum<1000){
            i++;
            sum += i;
        }
        System.out.println("1 から "+i+"までの和 = " + sum);
    }
}
```

課題 0202 Harmonic1toXwhile

```
package j1.remedial02;

public class Harmonic1toXwhile {
    public static void main(String[] args) {
        double sum = 0.0;
        int i=0;
        while(sum < 10){
            i++;
            sum += 1.0/i;
        }
        System.out.println("1 から " + i + " までの逆数の和 = " + sum);
        System.out.println("区分求積法による確認: "
            + Math.log(i+1) + " < " + sum + " < " + (Math.log(i)+1));
    }
}
```

課題 0203 Prod1toXwhile

```
package j1.remedial02;

public class Prod1toXwhile {
    public static void main(String[] args) {
        int prod = 1;
        int i=1;
        while(prod < Integer.MAX_VALUE/i){
            prod *= i;
            i++;
        }
        System.out.println("1 から " + (i-1)+ " までの積 = " + prod);
        System.out.println("試しに" + i+ "*"
            + prod + " を int のまま計算すると " + (i*prod) );
        System.out.println("本当の値を double で計算すると"
            + (double)prod*i);
    }
}
```

課題 0204 SumInputWhile

```
package j1.remedial02;
import java.io.*;

public class SumInputWhile {
    public static void main(String[] args) throws IOException {
        BufferedReader reader =
            new BufferedReader(new InputStreamReader(System.in));
        int sum = 0;
        System.out.print("最初のデータを入力: ");
        int input = Integer.parseInt(reader.readLine());
        if(input >= 0){
            while(input >= 0){
                sum += input;
                System.out.print("次のデータを入力: ");
                input = Integer.parseInt(reader.readLine());
            }
            System.out.println("合計 = " + sum);
        }else{
            System.out.println("入力データは0個でした。");
        }
    }
}
```

課題 0205 AverageInputWhile

```
package j1.remedial02;
import java.io.*;

public class AverageInputWhile {
    public static void main(String[] args) throws IOException {
        BufferedReader reader =
            new BufferedReader(new InputStreamReader(System.in));
        int sum = 0;
        System.out.print("最初のデータを入力: ");
        int input = Integer.parseInt(reader.readLine());
        if(input >= 0){
            int count = 0;
            while(input >= 0){
                count++;
                sum += input;
                System.out.print("次のデータを入力: ");
                input = Integer.parseInt(reader.readLine());
            }
            System.out.println("合計 = " + sum);
            System.out.println("データ個数 = " + count);
            System.out.println("平均 = " + (double)sum/count);
        }else{
            System.out.println("入力データは 0 個でした。");
        }
    }
}
```

課題 0206 CompoundInterest

```
package j1.remedial02;
import java.io.*;

public class CompoundInterest {
    public static void main(String[] args) throws IOException {
        BufferedReader reader =
            new BufferedReader(new InputStreamReader(System.in));
        System.out.print("元金を入力してください(円): ");
        double amount = Double.parseDouble(reader.readLine());
        System.out.print("預ける年数を入力してください: ");
        int year = Integer.parseInt(reader.readLine());
        System.out.print("利息を入力してください(%): ");
        double rate = Double.parseDouble(reader.readLine());
        double multiplier = 1.0 + rate/100;
        for(int i=0; i<year; i++){
            amount *= multiplier;
        }
        System.out.println(year+"年後は"+amount+"円になります。");
    }
}
```

課題 0207 CompoundInterestWhen

```
package j1.remedial02;
import java.io.*;

public class CompoundInterestWhen {
    public static void main(String[] args) throws IOException {
        BufferedReader reader =
            new BufferedReader(new InputStreamReader(System.in));
        System.out.print("元金を入力してください(円): ");
        double amount = Double.parseDouble(reader.readLine());
        System.out.print("目標貯蓄額を入力してください(円): ");
        double target = Double.parseDouble(reader.readLine());
        System.out.print("利息を入力してください(%): ");
        double rate = Double.parseDouble(reader.readLine());
        double multiplier = 1.0 + rate/100;
        int year = 0;
        while(amount < target){
            year++;
            amount *= multiplier;
        }
        System.out.println(year+"年後は"+amount+"円になります。");
    }
}
```