CHALLENGE INFORMATION

You have already solved this challenge ! Though you can run the code with different logic !

Course	JAVA	Session	Classes and Objects	Question Information	Level 1 Challenge 41

Problem

Question description

Suppose for a unit rise in temperature, the solubility of sugar in water increases by P g/100 ml.

Vincent does an experiment to check how much sugar (in g) he can dissolve given that he initially has 1 liter of water at Q degrees and the solubility of sugar at this temperature is R g/100 ml. Also, Vincent doesn't want to lose any water so he can increase the temperature to at most 100 degrees.

Assuming no loss of water takes place during the process, find the maximum amount of sugar (in g) can be dissolved in 1 liter of water under the given conditions.

Formula for maximum solubility is (R+(100-Q)*P)

Constraints:

$31 \leq Q \leq 40$

$101 \leq R \leq 120$

$1 \leq P \leq 5$

Input Format:

Single line of input contains three integers Q,R,P.

Output Format:

In a single line print the maximum amount of sugar that can be dissolved in 1 liter of water.

Test Cases

Logical Test Cases

Test Case 1

INPUT (STDIN)

```
3
40 120 1
35 120 2
40 115 3
```

EXPECTED OUTPUT

```
1800
2500
2950
```

Test Case 2

INPUT (STDIN)

```
3
45 125 2
56 121 3
54 128 1
```

EXPECTED OUTPUT

```
2350
2530
1740
```

Mandatory Test Cases

Test Case 1

KEYWORD

```
class Solubility
```

Test Case 2

KEYWORD

```
int q,r,p;
```

Test Case 3

KEYWORD

```
Solubility obj1=new
Solubility();
```

Test Case 4

KEYWORD

```
obj1.r = sc.nextInt();
```

Complexity Test Cases

Test Case 1	Test Case 2	Test Case 3
CYCLOMATIC COMPLEXITY	TOKEN COUNT	NLOC
2	155	23

Code Editor

You have already solved this challenge ! Though you can run the code with different logic !

Code Editor — JAVA SE 1.8 — Light Theme

```
1  import java.io.*;
2  import java.util.*;
3  public class Class332241010280 {
4      static class Solubility{
5          int q,r,p;
6      }
7       public static void main(String[] args) {
8          Scanner sc = new Scanner(System.in);
9          int n = sc.nextInt();
10         for(int i = 0; i<n; i++){
11             Solubility obj1=new Solubility();
12             obj1.q=sc.nextInt();
13             obj1.r = sc.nextInt();
14             obj1.p=sc.nextInt();
15             int maxsol = (obj1.r + (100 - obj1.q)*obj1.p)*10
16             System.out.println(maxsol);
17         }
18     }
19 }
```

Custom Input (stdin) — T1 | T2

```
3
40 120 1
```

Output — MATCH T1 | MATCH T2

```
1800
2500
2950
```

Complexity Analysis