

GE23131-Programming Using C-2024

Attempts allowed: 4

This quiz has been configured so that students may only attempt it using the Safe Exam Browser.

Time limit: 1 hour 30 mins

Grading method: Highest grade

Your attempts

Attempt 1	
Status	Finished
Started	Thursday, 16 January 2025, 4:11 PM
Completed	Thursday, 16 January 2025, 4:20 PM
Duration	9 mins 1 sec
<div>Review</div>	

The Safe Exam Browser keys could not be validated. Check that you're using Safe Exam Browser with the correct configuration file.

[Launch Safe Exam Browser](#)

GE23131-Programming Using C-2024

Status	Finished
Started	Thursday, 16 January 2025, 4:11 PM
Completed	Thursday, 16 January 2025, 4:20 PM
Duration	9 mins 1 sec

Question 1

Correct

🚩 [Flag question](#)

You are transporting some boxes through a tunnel, where each box is a parallelepiped, and is characterized by its length, width and height.

The height of the tunnel **41** feet and the width can be assumed to be infinite. A box can be carried through the tunnel only if its height is strictly less than the tunnel's height. Find the volume of each box that can be successfully transported to the other end of the tunnel. Note: Boxes cannot be rotated.

The first line contains a single integer n , denoting the number of boxes.

n lines follow with three integers on each separated by single spaces - $length_i$, $width_i$ and $height_i$ which are length, width and height in feet of the i -th box.

Constraints

$$1 \leq n \leq 100$$

$$1 \leq length_i, width_i, height_i \leq 100$$

Output Format

For every box from the input which has a height lesser than **41** feet, print its volume in a separate line.

Sample Input 0

4

5 5 5

1 2 40

10 5 41

7 2 42

Sample Output 0

125

80

Explanation 0

The first box is really low, only **5** feet tall, so it can pass through the tunnel and its volume is **$5 \times 5 \times 5 = 125$** .

The second box is sufficiently low, its volume is **$1 \times 2 \times 4 = 80$** .

The third box is exactly **41** feet tall, so it cannot pass. The same can be said about the fourth box.

Answer: (penalty regime: 0 %)

```
1  #include <stdio.h>
2  #define TUNNEL_HEIGHT 41
3  int main()
4  {
5      int n;
6      scanf("%d",&n);
7      for(int i=0;i<n;i++)
8      {
9          int length,breath,hei
10         scanf("%d %d %d",&len
11         if(height<TUNNEL_HEIG
12         {
13             int volume=length
14             printf("%d\n",vol
```

Answer: (penalty regime: 0 %)

```
1
2  41
3
4 ▼
5
6
7  ++)
8 ▼
9  eath,height;
10 %d",&length,&breath,&height);
11 NEL_HEIGHT)
12 ▼
13 e=length*breath*height;
14 d\n",volume);
15
16
17
18
19
```

	Input	Expected	Got	
✓	4	125	125	✓
	5 5 5	80	80	
	1 2 40			
	10 5 41			
	7 2 42			

Passed all tests! ✓

Incorrect

 [Flag question](#)

You are given n triangles, specifically, their sides a_i , b_i and c_i . Print them in the same style but sorted by their areas from the smallest one to the largest one. It is guaranteed that all the areas are different.

The best way to calculate a volume of the triangle with sides a , b and c is Heron's formula:

$$S = \sqrt{p * (p - a) * (p - b) * (p - c)} \text{ where } p = (a + b + c) / 2.$$

Input Format

First line of each test file contains a single integer n . n lines follow with a_i , b_i and c_i on each separated by single spaces.

Constraints

$$1 \leq n \leq 100$$

$$1 \leq a_i, b_i, c_i \leq 70$$

$$a_i + b_i > c_i, a_i + c_i > b_i \text{ and } b_i + c_i > a_i$$

Output Format

$$1 \leq n \leq 100$$

$$1 \leq a_i, b_i, c_i \leq 70$$

$$a_i + b_i > c_i, a_i + c_i > b_i \text{ and } b_i + c_i > a_i$$

Output Format

Print exactly n lines. On each line print **3** integers separated by single spaces, which are a_i , b_i and c_i of the corresponding triangle.

Sample Input 0

3

7 24 25

5 12 13

3 4 5

Sample Output 0

3 4 5

5 12 13

7 24 25

Explanation 0

The square of the first triangle is **84**. The square of the second triangle is **30**. The square of the third triangle is **4**. So the

The square of the first triangle is **84**. The square of the second triangle is **30**. The square of the third triangle is **6**. So the sorted order is the reverse one.

Answer: (penalty regime: 0 %)

```
1 #include <stdio.h>
2 #include <math.h>
3 #include <stdlib.h>
4 double calculatearea(int a,int
```

Syntax Error(s)

```
__tester__.c: In function 'calculatea
__tester__.c:5: error: expected '{' a
__tester__.c:5: error: control reache
cc1: all warnings being treated as er
```


Answer: (penalty regime: 0 %)

```
1 #include <stdio.h>
2 #include <math.h>
3 #include <stdlib.h>
4 double calculatearea(int a,int
```

Syntax Error(s)

```
__tester__.c: In function 'calculatea
__tester__.c:5: error: expected '{' a
__tester__.c:5: error: control reache
cc1: all warnings being treated as er
```

Finish review

Quiz navigation