

Lab Goal : This lab was designed to teach you how to use nested loops. You will also learn more about boolean algebra and Pythagorean triples.

Lab Description : Use nested loops to generate all of the Pythagorean triples from 1 up to a provided number. For three numbers to be a triple, they have to satisfy several requirements. First, the three numbers in the triple must satisfy the $a^2 + b^2 == c^2$. Second, if a is odd, b must be even and if a is even, then b must be odd, and c must be odd for either a / b combination. Lastly, the greatest common factor of a, b, and, c must be no greater than 1.

Sample Data :

110

Files Needed ::

Triples.java
TriplesRunner.java

Sample Output :

```
3 4 5
5 12 13
7 24 25
8 15 17
9 40 41
11 60 61
12 35 37
13 84 85
16 63 65
20 21 29
20 99 101
28 45 53
33 56 65
36 77 85
39 80 89
48 55 73
60 91 109
65 72 97
```

algorithm help

```
loop a
  loop b
    loop c
      check if a,b,c make a valid triple
```