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**Reciprocity Laws and Mystery of Triangles**

Week 3 Problems due Feb 10, 2016 at 23:30 UTC

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Week 3 > Reciprocity Laws and Mystery of Triangles > Problem (3-5)

## PROBLEM 3

What is your favorite right triangle whose sides are rational numbers? Write the sides of it on the Discussion forum. Also, calculate the area, and write it on the Discussion forum. The area of it need not be a prime number. Simply write your most favorite triangle.

Go to Discussion forum.

## PROBLEM 4 (1/1 point)

When there exists a right triangle with area  $P$  whose sides are rational numbers, the prime number  $P$  is called a

☐ congruence number.

☒ congruent number.

☐ congeal number.

☐ congregate number.

☐ congrats number.

*You have used 1 of 2 submissions*

## PROBLEM 5 (2/2 points)

There exists a right triangle with area 41 with **legs  $A/3$ ,  $B/C$ , and hypotenuse  $D/E$** . Fill a positive integer in each of the blanks. Write fractions in lowest terms.

A

B

40

123

**Answer: 40**

40|

C

20

**Answer: 20**

20|

E

60

**Answer: 60**

60|

*You have used 1 of 2 submissions***Answer: 123**

123|

D

881

**Answer: 881**

881|

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