PROBLEM 5 (3/3 points)

Calculate integers modulo 7 as follows.

For example, since the remainder of 4+5=9 is 2 when we divide it by 7, we write

$$4 + 5 \equiv 2 \pmod 7.$$

Similarly, we have

(1) $5 + 3 \equiv A \pmod 7$

(2) $(2 - 6) \times 4 \equiv B \pmod 7$

(3) $4 \times 3 \times 2 \times 1 \equiv C \pmod 7$

Write an integer between 0 and 6 in each of the blanks.

A	B	C
1	5	3
✔ Answer: 1	✔ Answer: 5	✔ Answer: 3

1 5 3

You have used 1 of 2 submissions

PROBLEM 6 (1/1 point)

Fermat's theorem on sums of two squares is a special case of more general laws of prime numbers, which are usually called

- Sum-Prime Laws.
- Primitive Laws.
- Reciprocity Laws. ✔
- Reciprocal Laws.

- Recreational Laws.

You have used 1 of 2 submissions