

Answer on Question #82604 – Math – Abstract Algebra

Question

Find the smallest a that is congruent to $3412 \pmod{4}$.

Solution

Let consider only positive numbers.

$$a = b \pmod{n}$$

$$a = 3412 \pmod{4}$$

$$a - 3412 = k \cdot 4$$

$$\text{If } k = 1, \quad a - 3412 = 4, \quad a = 3412 + 4 = 3416.$$

Answer: $a = 3416$.