Problem (5-6)

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Problem 5

1.0/1.0 point (graded)

Assume that integers A, B, and C satisfy the following:

$$2^5 \equiv A \pmod 5 \quad 0 \le A \le 4$$
$$5^{12} \equiv B \pmod 7 \quad 0 \le B \le 6$$
$$6! \equiv C \pmod 7 \quad 0 \le C \le 6$$

Find A, B, and C.

$A =$ 2 ✔Answer: 2

$B =$ 1 ✔Answer: 1

$C =$ 6 ✔Answer: 6

Submit You have used 2 of 2 attempts

Answers are displayed within the problem

Problem 6

1.0/1.0 point (graded)

What is the name of the theorem which implies there are at most D elements $1 \leq A \leq P-1$ satisfying $A^D \equiv 1 \pmod{P}$?

- Laplace's Theorem
- Lagrange's Theorem ✔
- Legendre's Theorem
- Wilson's Theorem

Submit You have used 1 of 2 attempts

Answers are displayed within the problem

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