CS344: Design and Analysis of Computer Algorithms

Homework 1

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1.11) Is $4^{1536} - 9^{4824}$ divisible by 35?
Answer:

temp

1.12) What is $2^{2^{2006}}$ mod 3
Answer:

temp

1.13) Is the difference of $5^{30,000}$ and $6^{123,456}$ a multiple of 31?
Answer:

temp

1.25) calculate 2^{125} mod 127 using any method you choose
Answer:

temp

1.33) Give an efficient algorithm to compute the least common multiple of two n-bit numbers x and y, that is, the smallest number divisible by both x and y. What is the running tie of your algorithm as a function of n?
Answer:

temp

1.39) Give a polynomial-time algorithm for computing a^{b^c} mod p, given a, b, c, and prime p.
Answer:

temp

Problem)

Answer:

temp