Homework 3

Q1. (10 points) Is $4^{1536} \equiv 9^{4824} \bmod 35$

Q2. (10 points) Solve $x^{86} \equiv 6 \bmod 29$

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Q3. (10 points) Prove that $gcd(F_{n+1}, F_n)=1$, for $n \geq 1$, where F_n is the n-th Fibonacci element.

Important:

You must show all the detailed steps to get credit for a question. Simply writing the answer is NOT enough.