Problem 1 (6+7 pts). Let $n = 624$ and $m = 735$.

a. Determine $\gcd(n, m)$.

b. Use Euclidean algorithm to write $\gcd(n, m)$ as a linear combination of $n$ and $m$.

Problem 2 (7 pts). Solve the congruence $x^{44} - 3 \equiv 6 \mod 7$. 