- Problem 2: A few people lost points because they forgot to point out that $\gcd(6, 175) = 1$. This is important to note, as you wouldn't be able to use Euler's formula otherwise
- Problems 4/5: If p is prime and $p \mid ab$, then $p \mid a$ or $p \mid b$. **It's very important that p is prime!** Note that $10 \mid 2 \cdot 5$ but 10 doesn't divide 2 nor 5.
- Bezout's lemma states: given $a, b, d \in \mathbb{Z}$, the equation $ax + by = d$ has an integer solution $x, y \in \mathbb{Z}$ if and only if $\gcd(a, b) \mid d$. This does **not** imply that if $ax' + by' = d$ for some integers a, b, x', y', then $d = \gcd(a, b)$.
- Problem 5: A few people said that since $\gcd(a, m) = 1$ and $\gcd(a, n) = 1$, there must exist $x, y \in \mathbb{Z}$ such that $ax + my = 1$ and $ax + ny = 1$. This is **not** true. What is true is that there exist two pairs of integers, x_1, y_1 and x_2, y_2 such that $ax_1 + my_1 = 1$ and $ax_2 + ny_2 = 1$. But there's no reason to think that $x_1 = x_2$ and $y_1 = y_2$.