

1. Prove that if a is a positive integer then $\gcd(a, 0) = a$.
2. Suppose d is a common divisor to a and b . Prove that $d|(ma + nb)$ for all $m, n \in \mathbb{Z}$.
3. Suppose a and b are positive integers with $d = \gcd(a, b)$, prove $\gcd(a/d, b/d) = 1$.