Homework 2, due September 4

(1) Show that if $a|n, b|n$, and $\gcd(a, b) = 1$, then $ab|n$.
(2) Say that a positive even integer is "prime-even" if it cannot be written as the product of two smaller positive even numbers. Show that unique factorization into prime-evens fails for the positive even numbers.
(3) Compute by hand the greatest common divisor of 1290 and 714.