1a)



1b) if b = 0 and n = 0, gcd(a, 0) is true

Assuming a > b, and b >= 0, q and r are the quotient and remainder of dividing a!!n.

And f = (b \* n) and s = (a \* n). Therefore s= q \* (f) + r and that (f) > r >= 0.

gcd((s), (f)) = gcd ((f),(s))

and

gcd ((f),(s)) = gcd((f),(q \* f + r))

and

gcd((f),(q \* f + r)) = gcd((f), r)

Which means the next call is gcd((a \* n - 1), (b \* n - 1)) which is equal to gcd ((f), r)