Subject: Recitation 4

$n \mid k$

P1. (a) ~~$k \mid n$~~ ~~$k \neq 1$~~ ~~for~~ ~~$n \neq 1$~~

(b) $jk = cn + 1$ therefor

$jk - cn = 1$

$\gcd(k, n)$

n, k

P2. Proof (by Ind.)

I.H. $P(n) ::= \gcd(F_n, F_{n-1}) = 1$

B.C. $\gcd(1, 0) = 1$ ✓

I.S. assume $P(n)$

$\gcd(F_n, F_{n-1}) = iF_n + jF_{n-1} = 1$

$\rightarrow \exists\ c, k$ s.t. $(c+k)F_n + cF_{n-1} = 1$ ✓