

ADDITIONAL INDUCTION PROBLEMS

1. If n is a natural number, then $0^2 + 1^2 + 2^2 + 3^2 + 4^2 + \dots + n^2 = \frac{n(n+1)(2n+1)}{6}$
2. If n is a natural number, then $9 \mid (n^3 + (n+1)^3 + (n+2)^3)$.
3. If n is a natural number, then $\sum_{k=0}^n F_k = F_{n+2} - 1$
4. If n is a natural number, then $\sum_{k=0}^n F_k^2 = F_n F_{n+1}$