**Math 262a — Topics in Combinatorics — Fall 1999 — Glenn Tesler**
Homework 3 — October 22, 1999

Note that the proofs I gave in class came partly from A=B and partly from Koepf's book, and the notation got a bit mixed up.

| **In lecture** | **In Koepf's book** |
| --- | --- |
| $p(k), q(k), r(k), s(k), a(k)$ | $p_k, q_k, r_k, s_k, a_k$ |
| $\alpha(k) = a(k+1)/a(k)$ | written out every time; no name is given to it |
| $y(k) = s(k)/a(k)$ | $R_k = s_k/a_k$ |
| $y(k) = \frac{r(k)}{p(k)} x(k)$ | $R_k = \frac{r_k}{p_k} f_{k-1}$ |
| $x(k)$ | $f_{k-1}$ |
| $q(k+1)x(k+1) - r(k)x(k) = p(k)$ | $q_{k+1}f_k - r_k f_{k-1} = p_k$ |

1. Easy problems: Koepf Chapter 5# 1, 2, 13

2. Problems to do by hand: Koepf Chapter 5# 10, 20, 21.

3. Problems requiring a computer or a lot of patience: Koepf Chapter 5# 8(a,d,i), 25, 26(a,c,d). (Most of 25 can be done by hand, though.)