- **Problem 7.9.** $G^0 = 0$. $G_1 = 1$ and $G_n = 7G_{n-1} - 12G_{n-2}$ for $n > 1$. Compute G_5. Show $G_n = 4^n - 3^n$ for $n \geq 0$.

- **Problem 7.12(c). (See Problem 7.28 for hints.)** Tinker to guess a formula for each recurrence and prove it. In each case $A_1 = 1$ and for $n > 1$:

  (a) $A_n = 10A_{n-1} + 1$

  (b) $A_n = nA_{n-1}/(n+1) + n$

  (c) $A_n = 10nA_{n-1}/(n-1) + n$

- **Problem 7.13(a).**

- **Problem 7.19(d).**

- **Problem 7.42.**

- **Problem 7.45(c).**

- **Problem 7.49.**

- **Problem 8.12(d).**

- **Problem 8.14.**