**Investing over Time**

We are going to manage an investment portfolio over a 6-year time horizon. We begin with $1000, and at various times we can invest in one or more of the following:

- Savings account X, annual yield 5%.
- Security Y, 2-year maturity, total yield 12% if bought now, 11% thereafter.
- Security Z, 3-year maturity, total yield 18%.
- Security W, 4-year maturity, total yield 24%.

To keep things simple we will assume that each security can be bought in any denomination. (This assumption can be relaxed if one uses integer or dynamic programming.) We can make savings deposits or withdrawals anytime. We can buy Security Y any year but year 3. We can buy Security Z anytime after the first year. Security W, now available, is a one-time opportunity. How should we invest to maximize the final yield?