Example 10-5: The following feedback filter:

$$y[n] = 0.5y[n-1] - 3x[n] + 2x[n-1]$$

would be implemented in MATLAB by

```
yy = filter([-3,2], [1,-0.5], xx)
```

where xx and yy are the input and output signal vectors, respectively. Notice that the aa vector has 1 for its first element and $-a_1$ for its second element, just like in the denominator polynomial $A(z)$ in (10.15e).

In general, we arrange the difference equation so that the coefficient multiplying $y[n]$ is 1 (e.g., by rescaling coefficients if necessary).