

# Loan Computations

Kurt Bryan and SIMIODE

This script illustrates loan payment computations for the "Money Matters" project in Chapter 2.

First, choose interest rate "r", initial borrowed amount "p0", monthly payment/investment "b"

```
r = 0.03; %Interest rate
payments = 180; %Number of payments
p0 = 250000; %Initial loan balance
b = 1726.45; %Monthly payment amount
p = zeros(payments,1); %Array to hold monthly balance, Matlab indexes from 1
```

Loop over months, store balance in array "p".

```
fprintf("Month %d Balance %.2f\n", 0, p0);
p(1) = (1 + r/12)*p0 - b;
fprintf("Month %d Interest %.2f Balance %.2f\n", 1, r*p0/12, p(1));
for k=2:payments
    p(k) = (1 + r/12)*p(k-1) - b;
    fprintf("Month %d Interest %.2f Balance %.2f\n", k, r*p(k-1)/12, p(k));
end
```