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# Loan Computations

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This is a notebook to illustrate loan payment computations for the "Money Matters" project in Chapter 2.

First, choose the interest rate "r", initial borrowed amount "p0", number of payments, and monthly payment "b":

```
In[1]:= r = 0.03
p0 = 250 000
b = 1726.45
payments = 180
```

Loop over months, store balance in array "p", indexed from p[0] to p[payments].

```
In[53]:= p = ConstantArray [0, payments];
StringForm["Month `` Balance ``", 0, NumberForm [N[p0], {6, 2}]]
p[[1]] = (1 + r / 12) * p0 - b;
s = StringForm["Month `` Interest `` Balance ``",
  1, r * p0 / 12, NumberForm [N[p[[1]], {6, 2}]]
For[k = 2, k ≤ payments, k++,
p[[k]] = (1 + r / 12) * p[[k - 1]] - b;
s = StringForm["Month `` Interest `` Balance ``",
  k, r * p[[k - 1]] / 12, NumberForm [N[p[[k]], {6, 2}]];
Print[s]
]
```