

Amortization - Simple Interest Loans

- SIL - you pay interest on remaining balance
- Since interest payments change every month, you can't use simple F/A formulas

→ Example: \$100,000 loan, 5% interest compounded annually
\$10,000 payments

		payment	interest	payment - interest	you owe
(years 0	F_0			100,000
	year 1	F_1 10,000	$(.05)(100k) = 5,000$	5,000	95,000
	year 2	F_2 10k	$.05(95k) = 4,75k$	5,25k	89.75k
	year 3	F_3 10k	$.05(89.75k) = 4,4875k$	5,5125k	84.2375k
	year n+1	F_{n+1} m	$i(F_n)$	$m - iF_n$	$F_n - (m - iF_n) = F_n(1+i) - m$

interest is changing

Terminology

interest

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