

5.4 Amortization Schedules

Shrinking Interest
Payments


Amortization Schedules

- Your monthly payment is the same each month, but the portion of that payment that is applied as interest changes.

AMORTIZATION SCHEDULE

- Banks give borrowers an **AMORTIZATION SCHEDULE** that lists:
 - Interest portion of monthly payment
 - Payment number
 - Monthly payment
 - Reduction in unpaid balance (note reduction)
 - Remaining unpaid balance

AMORTIZATION SCHEDULE

- Payment number -
 - # of months that have passed since  was borrowed

AMORTIZATION SCHEDULE

- Interest Due-

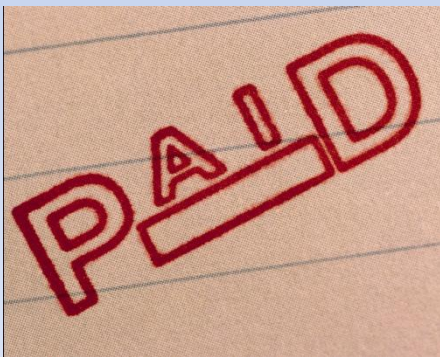
- determined by multiplying the monthly interest rate by the previous months unpaid balance



AMORTIZATION SCHEDULE

- Note Reduction

– found by subtracting the interest due from the monthly payment

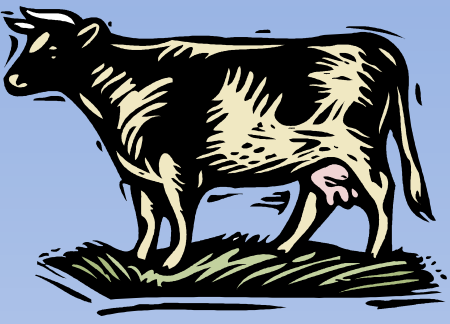


AMORTIZATION SCHEDULE

- Unpaid balance
 - previous month's unpaid balance minus note reduction
 - How much of the original loan is still unpaid

Prepayment

- You can prepay the balance of a loan.
 - Why would you want to prepay a loan?
 - To save money on interest charges.



Prepayment

- A motorist, driving by a Texas ranch, hit and killed a calf that was crossing the road. The driver went to the owner of the calf and explained what had happened. He then asked what the animal was worth.
- "Oh, about \$200 today," said the rancher. "But in six years it would have been worth \$900. So \$900 is what I'm out."
- The motorist sat down and wrote out a check and handed it to the farmer.
- "Here," he said, "is the check for \$900. It's postdated six years from now."

Amortization Schedule Formulas

- Prepayment Penalty
 - Charged to offset a portion of the lost revenue and additional clerical costs.

Skill 1

- $I_1 = rL$
 - $R_1 = P - I_1$
 - $B_1 = L - R_1$
 - $I_2 = rB_1$
 - $R_2 = P - I_2$
 - $B_2 = B_1 - R_2$
- Where:
 - L = loan amount
 - r = monthly interest rate
 - P = payment amount
 - I_1 = interest due at end of month 1
 - R_1 = loan reduction at end of month 1
 - B_1 = balance at end of month 1

Skill 1

- Darren Helm wants to know what his loan amortization schedule will look like for the first the **3 months** of his loan for **\$4343** for **3 yrs** at **8%**.

<u>Payment #</u>	Payment Amt	Interest Due	Note Reduction	Unpaid Balance
1				
2				
3				

Payment #	Payment Amt	Interest Due	Note Reduction	Unpaid Balance
				\$4343.00
1	\$136.09	\$28.95	\$107.14	\$4235.96
2	\$136.09	\$28.24	\$107.85	\$4128.11
3	\$136.09	\$27.50	\$108.59	\$4019.52