7-4 PURCHASING A HOME

ADVANCED FINANCIAL ALGEBRA

WHAT ARE THE OTHER COSTS OF BUYING A HOUSE?

- A mortgage payment does not cover all costs of owning a home.
- Other recurring costs:
  - Property taxes
  - Homeowners insurance
  - Maintenance and repairs
  - Et cetera
- Remember to include these when calculating how much house you can afford on your budget.

ONE TIME COSTS WHEN PURCHASING A HOME

- There are also one time costs when you buy a house.
  - Deposit – paid to owner
  - Down payment – paid to bank
  - Realtor fees
  - Title fees
  - Points – see section 7-5 (optional)
  - Transfer tax
  - Prepaid interest for the partial month in which you buy the house.

About 2% to 6% of the cost of the house

EXAMPLE 1 – PREPAID INTEREST

- Leah and Josh are buying a $600,000 home. They have been approved for a 3.75% APR mortgage. They made a 15% down payment and will be closing on September 6. How much should they expect to pay in prepaid interest at the closing?

- SOLUTION:
- Down payment = $600,000 (.15) = $90,000
- Remaining balance = P = original loan amount = $600,000 – 90000 = $510,000
- First year loan interest = $510,000 (.0375) = $19,125
- First day loan interest = $19,125 / 365 = $52.40 per day
- 30 days – 6 days = 24 days
- $52.40 per day * 24 days = **$1,257.60 owed in prepaid interest for the rest of September.**

EXAMPLE 2 – TOTAL CLOSING COSTS?

EXAMPLE 4/5– SPREADSHEET EQUATION

- Look at the spreadsheets on pages 424 & 425.

a) How does the formula for the ending balance change from one table to the other?

b) Why are they different?

- SOLUTION:
- Column D is new because the owners are making an extra payment each month to pay off loan faster and to pay less total interest.
- G6 = B6 – C6 – D6

	A	B	C	D	E	F
1	Principal	$300,000.00				
2	Interest Rate as a Percent	3.98				
3	Length of Loan	15				
4	Number of Yearly Payments	12				
5	Payment Number	Beginning Balance	Monthly Payment	Towards Interest	Towards Principal	Ending Balance
6	1	$300,000.00	$2,216.06	$995.00	$1,221.06	$298,778.94
7	2	$298,778.94	$2,216.06	$990.95	$1,225.11	$297,553.83
8	3	$297,553.83	$2,216.06	$986.89	$1,229.17	$296,324.66
9	4	$296,324.66	$2,216.06	$982.81	$1,233.25	$295,091.41
10	5	$295,091.41	$2,216.06	$978.72	$1,237.34	$293,854.08

	A	B	C	D	E	F	G
1	Principal	$300,000.00					
2	Interest Rate as a Percent	3.98					
3	Length of Loan	15					
4	Number of Yearly Payments	12					
5	Payment Number	Beginning Balance	Monthly Payment	Extra Payment	Towards Interest	Towards Principal	Ending Balance
6	1	$300,000.00	$2,216.06	$100.00	$995.00	$1,321.60	$298,678.94
7	2	$298,678.94	$2,216.06	$100.00	$990.62	$1,325.44	$297,353.50
8	3	$297,353.50	$2,216.06	$100.00	$986.22	$1,329.84	$296,023.67
9	4	$296,023.67	$2,216.06	$100.00	$981.81	$1,334.25	$294,689.42

ADJUSTABLE RATE MORTGAGES (ARM)

- In my opinion, adjustable rate mortgages are riskier because the interest rate and monthly payments can increase.
- "Buyer Beware" – know what you are signing and read the fine print on your loan documents so that there are not any surprises during the loan term.

ASSIGNMENT: PG 428 # 2, 11, 12, 15

- #2

Del is buying a $250,000 home. He has been approved for a 3.75% mortgage. He was required to make a 15% down payment and will be closing on the house on July 15. His first mortgage payment is due on August 1. How much should he expect to pay in prepaid interest at the closing?

- #11

Shannon took out a $300,000, 15-year mortgage with an APR of 3.65%. The first month she made an extra payment of $400. What was her ending balance at the end of that first month?

ASSIGNMENT: PG 428 # 2, 11, 12, 15 CON'T

- #12

Examine the loan amortization table for the last 5 months of a $500,000, 15-year mortgage with an APR of 4.05%. Determine the missing table amounts.

Payment Number	Beginning Balance	Monthly Payment	Towards Interest	Towards Principal	Ending Balance
176	$18,368.50	a.	$61.99	$3,648.99	$14,719.52
177	b.	a.	$49.68	$3,661.30	$11,058.21
178	$11,058.21	a.	c.	$3,673.66	$7,384.56
179	$7,384.56	a.	$24.92	d.	$3,698.50
180	$3,698.50	a.	$12.48	$3,698.50	e.

ASSIGNMENT: PG 428 # 2, 11, 12, 15 CON'T

- #15

Tom took out a $440,000 15-year adjustable rate mortgage with a 2.85% initial 6-month rate. The amortization table for the initial rate period is shown. After the first 6 months, the rate went up to 3.45%. Calculate the next line of the table.

Payment Number	Beginning Balance	Monthly Payment	Towards Interest	Towards Principal	Ending Balance
1	$440,000.00	$3,006.92	$1,045.00	$1,961.92	$438,038.08
2	$438,038.00	$3,006.92	$1,040.34	$1,966.58	$436,071.50
3	$436,071.50	$3,006.92	$1,035.67	$1,971.25	$434,100.26
4	$434,100.26	$3,006.92	$1,030.99	$1,975.93	$432,124.33
5	$432,124.33	$3,006.92	$1,026.30	$1,980.62	$430,143.71
6	$430,143.71	$3,006.92	$1,021.59	$1,985.33	$428,158.38