

◆ **Homework Check:** FCM 12 p. 433 # 1 – 10◆ **Note:** Amortization Tables

A mortgage or loan of any type is amortized when both the principal and interest are paid off with a series of regular, equal payments. An amortization table analyses how the loan is repaid by showing the breakdown with each payment made, the amount of interest paid and the amount of principal paid to the lender. For example, take into consideration the following amortization table for a \$2500 loan paid out over 2 years, with a monthly payment and interest of 6.9% compounded monthly.

Loan Amount	2500
Interest Rate	6.90%
Years	2
Payments	\$111.82

<http://www.wikihow.com/Prepare-Amortization-Schedule-in-Excel>

Period	Beginning Balance	Payment	Principal	Interest	Cumulative Principal	Cumulative Interest	Ending Balance
1	2500	\$111.82	\$97.44	14.375			\$2,402.56
2	\$2,402.56	\$111.82	\$98.00	13.81	\$98.00	\$13.81	\$2,304.55
3	\$2,304.55	\$111.82	\$98.57	13.25	\$196.57	\$111.25	\$2,205.99
4	\$2,205.99	\$111.82	\$99.13	12.68	\$295.70	\$209.25	\$2,106.85
5	\$2,106.85	\$111.82	\$99.70	12.11	\$395.41	\$307.82	\$2,007.15
6	\$2,007.15	\$111.82	\$100.28	11.54	\$495.68	\$406.95	\$1,906.87
7	\$1,906.87	\$111.82	\$100.85	10.96	\$596.54	\$506.65	\$1,806.02
8	\$1,806.02	\$111.82	\$101.43	10.38	\$697.97	\$606.92	\$1,704.58
9	\$1,704.58	\$111.82	\$102.02	9.80	\$799.99	\$707.77	\$1,602.57
10	\$1,602.57	\$111.82	\$102.60	9.21	\$902.59	\$809.20	\$1,499.96
11	\$1,499.96	\$111.82	\$103.19	8.62	\$1,005.79	\$911.22	\$1,396.77
12	\$1,396.77	\$111.82	\$103.79	8.03	\$1,109.57	\$1,013.82	\$1,292.98
13	\$1,292.98	\$111.82	\$104.38	7.43	\$1,213.96	\$1,117.01	\$1,188.60
14	\$1,188.60	\$111.82	\$104.98	6.83	\$1,318.94	\$1,220.79	\$1,083.62
15	\$1,083.62	\$111.82	\$105.59	6.23	\$1,424.53	\$1,325.17	\$978.03
16	\$978.03	\$111.82	\$106.19	5.62	\$1,530.72	\$1,430.15	\$871.84
17	\$871.84	\$111.82	\$106.81	5.01	\$1,637.53	\$1,535.73	\$765.03
18	\$765.03	\$111.82	\$107.42	4.40	\$1,744.95	\$1,641.93	\$657.61
19	\$657.61	\$111.82	\$108.04	3.78	\$1,852.98	\$1,748.73	\$549.57
20	\$549.57	\$111.82	\$108.66	3.16	\$1,961.64	\$1,856.14	\$440.92
21	\$440.92	\$111.82	\$109.28	2.54	\$2,070.92	\$1,964.18	\$331.63
22	\$331.63	\$111.82	\$109.91	1.91	\$2,180.83	\$2,072.83	\$221.72
23	\$221.72	\$111.82	\$110.54	1.27	\$2,291.38	\$2,182.11	\$111.18
24	\$111.18	\$111.82	\$111.18	0.64	\$2,402.56	\$2,292.02	(\$0.00)

What do you notice about the interest payments when compared to the principal payments as time progresses?

What do you notice about the totals at the bottom of each column?

It is important to note that as the initial amount of the loan increases, the initial amount of the interest also increases. When a home owner buys a house, an amortization table begins as follows:

Period	Beginning Balance	Payment	Principal	Interest	Cumulative Principal	Cumulative Interest	Ending Balance
1	200000	\$1,001.25	\$417.91	583.33			\$199,582.09
2	\$199,582.09	\$1,001.25	\$419.13	582.11	\$419.13	\$582.11	\$199,162.95
3	\$199,162.95	\$1,001.25	\$420.36	580.89	\$839.49	\$1,000.02	\$198,742.60
4	\$198,742.60	\$1,001.25	\$421.58	579.67	\$1,261.07	\$1,419.15	\$198,321.02
5	\$198,321.02	\$1,001.25	\$422.81	578.44	\$1,683.88	\$1,839.51	\$197,898.21

Notice in this table, the interest is more than the principal by more than \$100 in the first payments. This continues for the first 5 years in this particular mortgage although the discrepancy does begin to even itself out and the interest and principal payment become more equal.

60	\$173,137.07	\$1,001.25	\$496.26	504.98	\$26,941.28	\$26,950.00	\$172,640.81
61	\$172,640.81	\$1,001.25	\$497.71	503.54	\$27,438.99	\$27,444.81	\$172,143.10
62	\$172,143.10	\$1,001.25	\$499.16	502.08	\$27,938.15	\$27,941.07	\$171,643.93
63	\$171,643.93	\$1,001.25	\$500.62	500.63	\$28,438.77	\$28,438.78	\$171,143.31

Consumers are often unaware of these details when buying a home. Of course, bankers will often approach consumers to re-evaluate interest rates and payment options several times over the years. Consumers may be able to find better options and increase their payment in order to pay less interest over the life of the mortgage as their work situations improve.

◆ **Homework:** FCM 12 p. 451 # 3, 5 – 8, 11, 13a, c