

Fin 5433 Mortgage Computation Practice Questions

Complete the following table:

Date	Payment	APR	Int Due (APR/1200 × Bal _{t-1})	Principal Paid (PMT – Int)	Balance (Bal _{t-1} – Prin _t)
Jan 1	0				250,000.00
Feb 1	1800.00	7.000%	1458.33	341.67	249,658.33
Mar 1	2000.00	7.500%	1560.36	439.64	249,218.69
Apr 1	1800.00	9.375%	1947.02	-147.02	249,365.72
May 1	1900.00	7.125%	1480.61	419.39	248,946.32

Q1. You currently owe \$125,000 on a 5.75% mortgage. How much interest will be due on your next payment? **598.96** If you make a payment of \$500, how much will be paid to principal, and what will your balance be after that payment? **-98.96 (accrued interest), 125098.96** Over the next 12 months, how much will you pay into interest if you continue payments of \$500 each month? **6000.00** You only can pay into interest what you paid, however, an alternate question would be how much interest accrued over the 12 month period, which using the amortization function will show **7219.31**.

Q2. You took out a bullet loan for \$7,000,000 at 5.75% with a 5 year term. What will your payments be? **59 payments of 33,541.67, and a final payment of 7,033,541.67**.

Q3. What is the monthly payment on a \$13,500,000, 6.125%, mortgage with a 25-year amortization period and a 10 year term? **88,015.14** How much interest will you pay in the 3rd month of this mortgage? **68,710.68** How much will you pay into interest in the 3rd year of this mortgage? **789,673.54** What will your balance be at the end of year 10? **10,347,112.94** If your bank charges you 2.5 points to obtain this loan, and you keep it for 10 years, what yield will the bank earn? $P/YR=12, I/YR(N=120, PV=-13162500, PMT=88015.14, FV=10347112.94) = 6.50$

If you must pay \$8,500 in other fees to close this loan, what is the cost to you of this loan (effective borrower cost), assuming you keep the loan for 10 years?

$P/YR=12, I/YR(N=120, PV=-13154000, PMT=88015.14, FV=10347112.94) = 6.51$

If you keep the loan only 3 years, what will the lender yield be?

$P/YR=12, I/YR(N=36, PV=-13162500, PMT=88015.14, FV=12746923.67) = 7.08$

If you keep the loan 3 years, what will your Effective Borrowing Cost be?

$P/YR=12, I/YR(N=36, PV=-3154000, PMT=88015.14, FV=12746923.67) = 7.10$