

Fin 4713: Review problems – Fixed Rate Mortgage

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? (Principal = -98.96, Balance = \$125,098.96)

Q2. What is the monthly payment on a \$135,000, 6.5%, 30-year mortgage? (853.24) How much interest will you pay in the 3rd month of this mortgage? (729.92) How much will you pay into interest in the 3rd year of this mortgage? (8521.69) What will your balance be at the end of year 3? (130,163.35) If your bank charges you 2.5 points to obtain this loan, and you keep it for 30 years, what yield will the bank earn? (6.75%) What will the Federal Truth in Lending APR be? (6.75%) If you must pay \$850 in other fees to close this loan, what is the cost to you of this loan, assuming you keep the loan for 30 years? (6.81%). If you keep the loan only 3 years, what will the lender yield be? (7.45%) If you keep the loan 3 years, what will your Effective Borrowing Cost be? (7.69%)

Q3. Pat has just signed an earnest money agreement to purchase a home in Alamo Heights for \$850,000. Pat has applied for an 80% LTV, 30 year loan with an interest rate of 7.25% with 3 points. Assume the house appraises for at least the purchase price.

- How much will the lender disburse 659600
- What will the monthly principal and interest payment be? 4638.80
- How much will Pat pay into interest during the 3rd year of the loan? 48060.52
- How much will Pat pay into principal in the 4th year? 8175.17
- For Pat's 37th payment, how much will go to principal? 658.92
- For Pat's 37th payment, how much will go to interest? 3979.88
- What is Pat's loan balance after 36 months? 658738.69
- What is the effective interest cost if Pat keeps the loan for its full term (APR)? 7.5592%
- What is the effective interest cost if Pat keeps the loan for its full term (EAR)? 7.8267%
- What is the FTLAPR that must be reported on this loan (rounded to 1/8%) 7.500%
- If Pat pays off the loan after 36 months, what is the yield to lender as an EAR? 8.7320%
- If the lender wants an effective yield (APR) of 7.75%, and believes Pat will keep the loan for 30 years, how many points should be charged? 4.78
- What FLTAPR will the lender report? 7.75%
- If the lender wants an effective yield (APR) of 7.75%, and believes that Pat will keep the loan for 4 years, how many points should it charge? 1.68
- Under this scenario, what FLTAPR will the lender report? 7.375

Modified Loan Terms: The loan has a 2% prepayment penalty if the loan is paid off within 7 years (other terms as for original problem)

What is the yield to lender if the loan is held for 4 years (EAR)? 8.9106%

What would be reported as FTLAPR? 7.500%